EMOTIONAL ATTACHMENT FOR INFORMAL SYNCHRONOUS ONLINE LANGUAGE LEARNING

A Thesis submitted by

Elena Huston Candidate, MBA, BEdu(Hons), MCIL, CL

0050066369

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Abstract

This thesis describes research on emotional attachment (EA) for Informal Synchronous Online Language Learning (ISOLL). Its focus is online one-on-one video telephony mediated synchronous second or third language (L2/LX) lessons in informal settings. Anecdotally, my own teaching experience suggested that students became more actively engaged in online activities that resonated emotionally with their lives, needs or aspirations. Formally, the main research question for the study was:

How does EA enhance second language learning in diverse informal synchronous online learning contexts?

Necessary objectives involved clarifying EA, investigating its relative influence in diverse contexts, isolating its various constituents and articulating the pedagogical implications of EA.

The EA literature spans psychology, marketing and learning. In psychology, EA is an enduring bond with substantial motivational intensity, but it can become anxious. In marketing its constituents include Connection, Affection and Passion. In the learning field, EA is associated with Emotional Presence (EP) and Emotional Intelligence (EI) and influenced by Social and Teaching Presences (SP, TP). However, EA can hinder autonomous learning unless skilfully applied at the right juncture.

To answer the EA-ISOLL research question, the study adopted sequential explanatory approach with mixed methods. First, a Conceptual Phase formally articulated the EA contention and conducted a literature review in two stages that

generated a draft explanatory framework. In the second Operational Phase, the research investigated the impact of the EA on learning in different contexts and identified its constituents. Operationally, in 2017-18 the study surveyed students as well as ISOLL instructors. Graphical and statistical tools helped analyse and interpret survey data to clarify EA's constituents and assess its impact on learning. Subsequently, the study interviewed seven educational or language experts. The interviews enriched understanding of EA for informal learning and validated the EA-ISOLL model. The final phase of the research reflected on the statistical and qualitative results in the light of embedded teaching practice and seminal literature. Overall, the literature review, learner/practitioner survey, expert interviews and reflections balanced rigour with pragmatism and answered the EA-L2 ISOLL research question.

The results suggested that EA supports ISOLL and has five EA constituents: Affection, Connection, SP, TP and Flow. To foster EA, online instructors need to tune into student needs and embed a range of accessible but interactively and culturally relevant tasks that engender participatory L2 dialogue so that students achieve state of "flow" where they are stretched but absorbed in L2 dialogue or culturally conditioned L2 tasks. Flow triggers internal, psychologically charged, cognitive transformation[*] for deep and meaningful L2/LX learning. Paradoxically, even in apparently informal online settings, L2/LX learning is nurtured by calibrated EA that charges Emotional Presence (EP) in teachers and students and energises interactive L2 lessons. As LX students mature, they become more autonomous and EA merges with Emotional Intelligence (EI). In short, to be useful, EA needs to be calibrated or appropriately managed, so it energises without

[*] Переживание (perezhivanie) in Russian

destabilising EP, dialogue and engagement to foster EI and culturally sensitive L2/LX autonomy.

Keywords

Emotional Attachment, online informal language learning, socio-cultural learning, engagement, flow, synchronous, autonomy

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Certification of Thesis

This Thesis is entirely the work of Elena Huston except where otherwise acknowledged. The work is original and has not previously been submitted for any other award, except where acknowledged.

Principal Supervisor: Associate Professor Petrea Redmond

Associate Supervisor: Associate Professor Jeong-Bae Son

Student and supervisors' signatures of endorsement are held at the University.

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I dedicate this thesis to the memory of my grandfather, Nikolai Bukreev, who always believed in me. He was an innovator in product design and lived through two World Wars, the Russian Revolution and Stalinist repression. He worked till the last days of his life and, were he still alive, would be very proud of me.

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Publications

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Glossary, acronyms and definitions

Word or acronym	Meaning	Definition
Accessibility		Learning design, interaction and tasks appropriate to student's needs, including indigenous students or those with special educational needs
CABLS	Complex adaptive blended learning system	Dynamic and integrative system of blended learning, involving learner, instructor, technology, content, support and the institution (Cleveland-Innes & Wilton, 2018, p. 10).
CALS	Complex adaptive learning system	Broader notion than CABLS that includes classroom and informal learning
CP	Cognitive Presence	Community of Inquiry aspect of reflective and critical thinking
CoI	Community of Inquiry	Framework, where Social Presence, Cognitive Presence and Teaching Presence influence learning (Garrison, 2007).
Corpus (plural: corpora)		Collection of relevant and culturally appropriate texts helpful in determining appropriate lexicography (semantic, syntagmatic, and paradigmatic language relationships)
DV		Dependent variable and outcome or focus of research interest in inferential modelling. For the quantitative research the dependent variable was perceived learning success but, objectively, it involves engaging in the language learning (process) and collaborative dialogue to complete linguistic tasks (output)
EA	Emotional attachment	An enduring internal psychological bond between learner and object
EFL	English as Foreign Language	English as Foreign Language learners who learn English in non-English-speaking countries

ELT	Experiential Learning Theory	Learning cycle with four stages: concrete experience, reflective observation and abstract conceptualisation (Kolb, 1984)
e-LL	Electronic Language Learning	Online synchronous and asynchronous language learning mediated via internet computer technology
Indigenous		Original inhabitants and owners of the land with unique cultural heritage
EI	Emotional Intelligence	Involves not only external affective expressions but also internal motivational and affective elements such as self-efficacy, openness, expanded self-awareness, heightened receptivity to others, and an enhanced ability to manage high arousal emotional states prevalent in complex L2 learning (Majeski, Stover & Valais 2018)
EP	Emotional Presence	Outward emotional signals in Community of Inquiry that interacts with Social Presence to foster "learning climate" and with Teaching Presence for emotional feedback. (Cleveland-Innes & Campbell, 2012)
ESL/EFL	English as Second Language	English as Second Language learners who learn English in English-speaking countries. ESL learners are those who learn English in English-speaking countries while EFL learners are those who learn English in non-English-speaking countries
Flow		State of concentrated (Csikszentimihalyi, 1991; Van Velzen, Volman, & Brekelmans, 2019)
FM	Framework Method	Systematic inductive technique to generate codes, used to analyse the expert interviews
ISOLL	Informal Synchronous Online Language Learning	Informal synchronous e-language learning involves the extensive use of synchronous telephony, via platforms such as Zoom, Adobe Connect, Google Hangouts, WebEx and Skype and supplemented by technologies like Padlet.
IV		Independent variables that influence or drive dependent variant. For the research, the independent variant of interest was EA.
Language culture		Shared but fuzzy attitudes, beliefs, behavioural conventions, and basic

		assumptions and values that influence meaning (Ishihara & Cohen, 2014).
Languaging		Notion developed by Merrill Swain that incorporates the entire language learning (process), including collaborative dialogue to complete linguistic tasks (output)
LC	Learning context	Ancillary influences on learning, including, cultural capital and status in the social structure
L2/LX	Second language	Second or multiple (LX) foreign languages, including ESL.
LMS	Learning Management System	Online learning platforms such as Moodle, Blackboard and Canvass
LP	Learning Progression	Achieving learning milestones that demonstrate increasingly critical thought
OFSTED	The Office for Standards in Education	UK Government school inspection agency
RQ	Key Research question	What is emotional attachment and how can it enhance second language learning in diverse informal synchronous online language learning contexts?
SLA	Second Language Acquisition	Equivalent to L2/LX
SCT	Socio-Cultural Learning Theory	In SCT, learning is socially constructed in uniquely situated emergent interactions. Micro, meso and macro social symbols and discourse mediate learning (Chomsky, 2000; Cole & Engeström 1993; Donato, 1994; Lantolf, 2000; Lantolf & Thorne 2006; Vygotsky, 1962, 1978; Wundt, 1920)
SLT	Social Learning Theory[2]	Theory associated with Bandura (1977) where students internalise behaviours, mediated by observation and cognition so response to stimuli more variable compared to Behaviourism.
SP	Social Presence	Strong personality projection by online L2 instructors that nurtures relationships and but structures learning

[2] Acronym can also stand for Second Language Teaching but not in my thesis.

TP	Teaching Presence	Leadership, guidance and interactions to enhance learning (Cleveland-Innes & Wilton, 2018)
TL	Target Language	Language being learnt or taught
Völkerpsychologie	Social Psychology	Cognition is shaped by socio-cultural milieu in a distributed system (Wundt, 1920)
WCF	Written Constructive Feedback	Direct or indirect (less detailed) online written feedback. Indirect WCF signals need for corpus consultation to resolve L2 errors
ZPD	Zone of proximal development	Development tasks that stretch children's ability and for which they need temporary scaffolded assistance to become competent

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Chapter 1 Emotional attachment and learning

1.1 Introduction

Technology continues to transform education landscapes, including those related to second language (L2) or more (LX) education (Chapelle, 2001). However, whilst blended or online distance learning in formal or informal modes provides flexibility, students can feel isolated from instructors or their peers and even become alienated. In Socio-Cultural Theory (SCT) as its name suggests, learning is mediated by the child's social and cultural context (Lantolf, 2000, 2006). In conjunction with the socio-cultural ecosystem, emotions and their regulation influence student engagement (Majeski, Stover & Valais, 2018). Emotions manifest in various ways during social and learning interactions. One is Emotional Attachment (EA) which is an enduring internal psychological bond between people like parents, friends or teachers, services, valued objects (like a mobile phone), or cultural artefacts, including online and other learning programmes (Vincent, 2006). My own experience as a language (L2/LX) instructor in Informal Synchronous Online Language Learning (ISOLL) settings motivated my research. I was most curious to discover the modes and extent to which emotions were involved in L2/LX.

But I found that I had entered a mind field of contention and complexity. I discovered that the meaning of learning and the best approach are contested. Traditionally, teachers talked, and students listened and absorbed. The idea was that the teacher transmitted facts or syntax to be cognitively processed by students. However, Vygotsky (1962) emphasised that socio-cultural interactions and collaboration are integral to learning. My research looks at way to enhance this socio-cultural support by increasing emotional attachment (EA).

Research suggests emotions not only have direct physiological impacts on pulse and blood pressure, but also influence learning behaviour and second language achievement (Chen & Lee, 2011). These reflections indicate that the deployment of electronic language learning (e-LL) needs to consider sociocultural, institutional, pedagogical and emotional considerations (Bates, 2003 & 2005; Felder, 2002).

Nowadays, and particularly since COVID 19, e-LL has become an integral component of ESL learning which extends beyond merely technological considerations. The range of available online education technologies is vast and encompasses Learning Management Systems (Moodle, Blackboard, Aula), MOOCS platforms (Coursera), generic social platforms (Facebook, Instagram, LinkedIn), Internet video or telephony (Zoom, Teams, Skype, SnapChat, WhatsApp), and open-source online communities and specialist delivery platforms or applications such as WordSteps.com, lang-8.com, Sharedtalk, Langled.Com.Home, Php, Englishbaby.Com, Interpals.Net, Padlet. A brief and anecdotal conspectus of the learning landscape suggests that ISOLL is likely to involve flexible instructor-learner interactions and ongoing technological innovation of the e-learning ecosystem, including but not limited to web technologies such as Zoom, Teams, Skype, Panopto, ScreenCastOmatic, Echo 360 (Block, 2003; Leather & Van Dam, 2003; Ochs & Schieffelin, 2009; Schieffelin & Ochs, 1986; Van Lier, 2004).

Ironically, in times of social distancing, L2/LX instructors seek to reduce transactional distance between student and instructor, separated by space or time (Moore, 1989). Well-designed courses, sustained interactions and culturally sensitive dialogue can help (Garrett and Baquedano-Lopéz, 2002; Moore, 1989, 1993). For Hillman, Willis and Gunawardena (1994) the quality of computer interactions also plays a role in closing transactional distance between learners and instructors.

As well as reviewing the technical L2/LX literature, my research reviewed the general teaching and learning literature and found that there are many learning perspectives but a complex interplay of internal and external factors influence it (Bandura,1977; Bloom, 1956; Dewey, 1933; Felder, 2002; Garrison, 2007; Krathwohl, 2002; Kolb, 1984; Vygotsky, 1978). In informal synchronous online learning (ISOLL) situations, instructor interactions and personal relationships are likely significant (Garrison, 2007).

Disruptive technological innovation, globalization and migration are among the many forces continuing to transform online or e-language learning (e-LL) landscapes (Block, 2003; Byram, 2008; Heller & Martin-Jones, 2001; Pavlenko, 2001). Notwithstanding unforeseen technological or global disruptions, the importance of student-focused lessons and engagement with evolving technologies remains central to improve learning experience (Sandholtz, 1997).

To help improve online learning delivery, it is useful to define learning, although the notion of learning "success" is contentious and potentially misguided. Assessments to ascertain learning achievement needs careful design if it is not to stress students or unfairly favor those comfortable with cramming or gaming. More useful than learning success is the notion of student engagement (Dörnyei 2020), as operationalised by monitoring interactions or states of flow in challenging L2/LX computer and other activities (Compeau, Higgins & Huff, 1999; Csikszentimihalyi,1991; Huitt, 2007). To design enchanting computerise LX lessons for engagement requires more than an initial assessment of students' knowledge and capabilities (Hill & Miller, 2013: McCarthy, Wright, Wallace, & Dearden, 2006). For Dörnyei (2020) it means putting students in charge of their *own learning* and then maintaining student-student or student-teacher collaborative interactions (Leutner, 2014).

This introduction has reviewed the learning and emotional backdrop and noted that learning is conditioned by a complex interplay of individual, institutional, technological and sociocultural considerations, mediated by interactions (Brown, 2018).

1.2 Study motivation and focus

My motivation for undertaking the study and writing the thesis was to improve L2 language teaching in online settings. I wanted to identify how to harness technologies and enrich student interactions to build emotional engagement and, hence, student motivation. From my own personal informal online L2 teaching experience, I suspected that EA has some benefits for informal online teaching that could reduce transactional distance between instructors and students to enhance learning. However, over time I came to appreciate the diversity of L2 language students in terms of maturity, learning needs[3], cultural background or parallel learning context (Redmond & Lock, 2017). It seemed to me that the emotional needs of these different students should be incorporated for ISOLL (Florian, 2010).

Whilst some scientists of a post-positivist orientation, notably Dawkins (1998), dismiss emotions as a troublesome irrelevance to scientific explanations, in alternative phenomenological (interpretive) and behavioural paradigms, they are very significant cognitive drivers (Cassidy, 2016). Children learn by observing and interpreting social behaviour, influenced by their ecology and emotions (Bandura, 1977; Chen & Lee, 2011; Jack, 2000; Rienties & Rivers, 2014). From, albeit anecdotal, personal experience from years of face-to-face and online synchronous language teaching, emotions influence course engagement, pedagogical interactions and socio-culturally effective L2 outputs or what Swain (2019) would term *languaging* (see Glossary and 2.3.2). I wanted more clarity about

[3] The study is aware of but is not focused on Special Education Needs and Disability (SEND.

EA for learning and to discover the extent and mechanism by which it can support or undermine learning in informal online contests, given all the other influences on LX learning.

1.3 Research questions

The main research question (RQ1 Main) for the project was:

How does EA enhance second language learning in diverse informal synchronous online learning contexts?

A complete answer to the study's main research question (RQ1) necessarily entails several subsidiary ones, involving EA definitions, constituents, influences and pedagogical implications:

- RQ2 (Definition): What is emotional attachment for informal synchronous online learning contexts?
- RQ3 (Influence of context and emotions): To what extent does emotional attachment influence informal synchronous online language learning, in different contexts?
- RQ4 (Constituents): What are the main constituents of emotional attachment?
- RQ5 (Pedagogy): How can language instructors enhance emotional attachment for learning?

1.4 Research aim and objectives

The subsidiary RQs sought clarification on different aspects of the main one (RQ1). The second subsidiary research objective (RQ2) was to harness the psychological, marketing and learning literature learning to clarify the meaning of EA-ISOLL. To meet its third objective of determining the extent to which EA influences learning in different informal synchronous settings, I surveyed or interviewed LX stakeholders, instructors and experts. Achieving the

third objective involved two elements establishing the influence of ISOLL context (RO3.1) and then establishing EA's role in learning progression (RO3.2). Pragmatically, for RO3.1, I investigated the existence of significant differences in perceived learning outcomes or emotions of the cohort linked to context (e.g. culture or social situation). For RO3.2, the research investigated correlations between learning and EA, controlling for other factors (covariates). The fourth study objective (RO4) involved isolating the constituents of EA, using the literature and by soliciting the views of learners and practitioners or interviewing experienced L2 practitioners. The final study objective (RO5) was to reflect on research findings and provide advice for L2 practitioners, drew upon insights from the secondary or primary sources, including my own L2 reflections.

Formally, my research objectives were:

RO1(main aim): To define emotional attachment for learning and investigate its influence on informal synchronous online language learning (ISOLL) in diverse contexts;

RO2: To clarify the meaning of EA for ISOLL;

RO3: To investigate the influence of EA on ISOLL in diverse learning contexts;

RO4: To identify the constituents of EA; and

RO5: To articulate useful pedagogical practices involving EA-ISOLL.

Figure 1.1 below illustrates my thesis objectives.

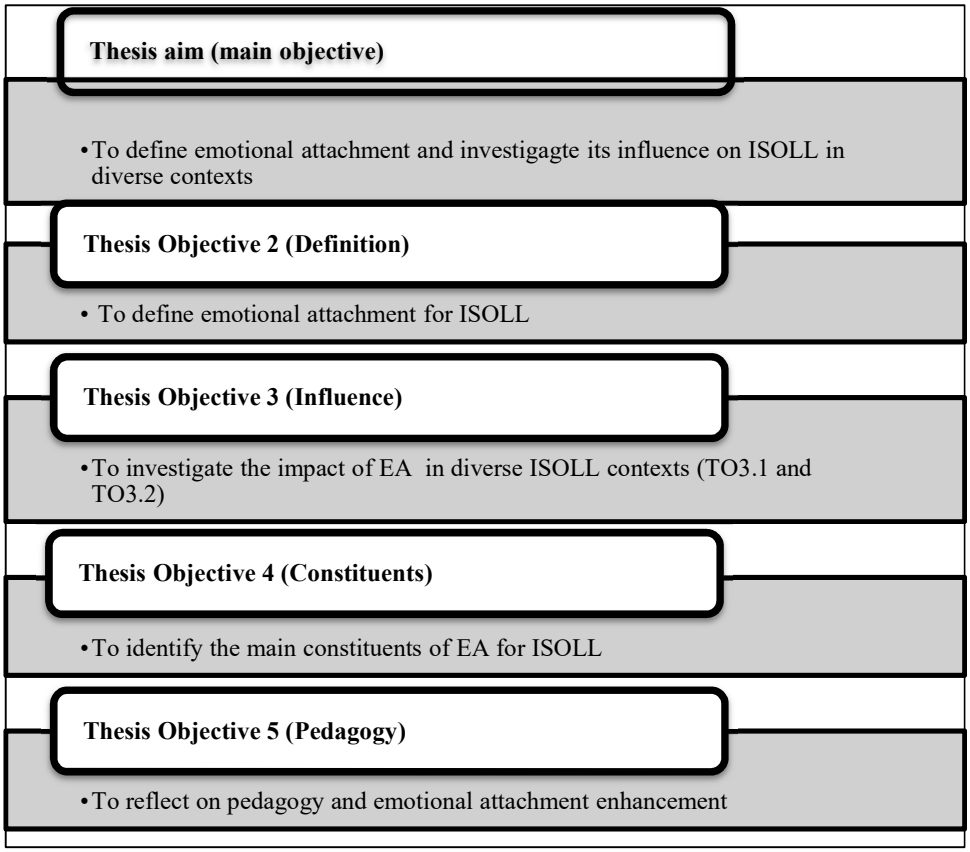


Figure 1.1: The main research objectives of the EA-ISOLL study

1.5 Thesis organisation

The dissertation is structured in seven chapters that reflected its three sequential phases. The first chapter here introduced the EA learning problem and sketched the research pathway for a complete answer. It noted EA and learning issues, clarified the research question and objectives and then summarised the research approach. The second chapter presents issues around EA in L2 language e-LL context. It then illuminated the EA notion by reviewing the educational, psychological and marketing literature to identify its various possible constituents for the draft framework. The study has three main functional phases: conceptual, operational, and reflective. Some phases involve several steps to reflect distinct tasks. For

example, during the operational phase, a survey and expert interviews were conducted. More details on the relevant chapters for each phase are included below.

1.5.1 Phase I: Conceptual

Chapters 1-3 articulated the first conceptual, research phase. In its first chapter, I introduced the notion of EA in its learning context and scoped the research problem. The second chapter harnessed the literature to unpack the meaning of EA for ISOLL (RO2) and find the factors that support it in different learning contexts (RO3). It investigated global learning issues and reviewed the EA literature in the educational, psychological and marketing fields, looking for key emotional and other factors influencing learning. The structured literature review generated a draft EA-ISOLL framework for subsequent testing. Chapter 3 explained the suitability of the adopted sequential explanatory mixed methodology, data sources and pragmatic mechanism to find a complete answer to the EA-L2 quandary.

1.5.2 Phase II Operational

The Operational Phase of the study involved two stages. The first stage was an online survey (Chapters 4) and the second stage involved expert interviews (Chapter 5). The survey, analyzed in Chapter 4, (Operational Stage I), was designed around the draft explanatory framework generated during the earlier conceptual phase (Chapter 2 literature review). Survey questions probed stakeholders in four broad areas. First, for RO3, to ascertain the relative importance of the learning context. Second, the questions sought to identify other learning covariates (see Definitions) or learning factors. To evaluate the impact of EA on learning for RO3, the research needed to control for other factors like motivation, student previous experience and teacher capabilities. Third, the survey sought to disentangle EA's constituents for RO4. Finally, the survey also looked for some initial pedagogical insights

(RO5) with its semi-structured questions that were considered during the next qualitative operational stage of the research.

Chapter 5 (Operational Phase, Stage II) enriched the qualitative survey feedback with L2 expert insights to overcome limitations of the nomothetic approach and resolve the role of passion in EA for a refined framework. Experienced L2 teaching experts provided insights into the techniques they used to identify student needs, design appropriate informal approaches that scaffolded yet engaged diverse learners to enable learning in different L2 contexts (Mitchell, Myles & Marsden, 2013; Withers & Dill, 2019). However, a complete answer to the EA learning conundrum called for reflection on the literature and my own personal L2 teaching experience.

To summarise, Chapter 4 used the survey to refine the draft EA-ISOLL framework, whilst in Chapter 5 expert interviews validated the framework and enriched understanding of the role of EA in learning.

1.5.3 Phase III Reflective

In the final phase of the project, (Chapter 6, 7) I synthesised results of the quantitative and qualitative aspects of the various phases and stages of the investigation and linked it with the literature. The final chapter (Chapter 7) also discussed further the pedagogical implications of the EA research (RO5). These two final study chapters also considered results of the survey and expert interviews in the light of the seminal literature and reflections on my own teaching. The iterative process provided a complete answer to the role and constituents of EA for linguistic learning in informal synchronous environments (EA-ISOLL). The synthesis and reflections highlighted the importance of culture, Social Presence (SP see 2.6.1), Teaching Presence (TP see 2.6.2), Affection, Connection and Flow as well hindrances to successful e-LL implementation. I used the research findings to suggest some pragmatic measures to

improve L2 learning. Chapter 7 also articulated some research limitations and pointed to fruitful further research avenues.

To summarise, the EA-ISOLL research involved three phases (see Figure 1.2 below) that dissertation chapters reflects:

- Ch2 for RO1 & RO2: Harness the academic and industry literature to develop a draft framework which structures subsequent investigations;
- Ch3: Identify suitable data sources and articulate a coherent and pragmatic methodology for a complete answer to the main RQ;
- Ch4 for RO2-4: Query online practitioners (instructors) and learners (learners) to refine the draft framework);
- Ch5 for RO2-4: Interview some linguistic experts to validate the refined framework but also to draw out insights into EA's impact on language learning in informal settings; and
- Ch6-7 for RO4: Synthesises operational results and reflects on them in the light of the literature and my own teaching experience.

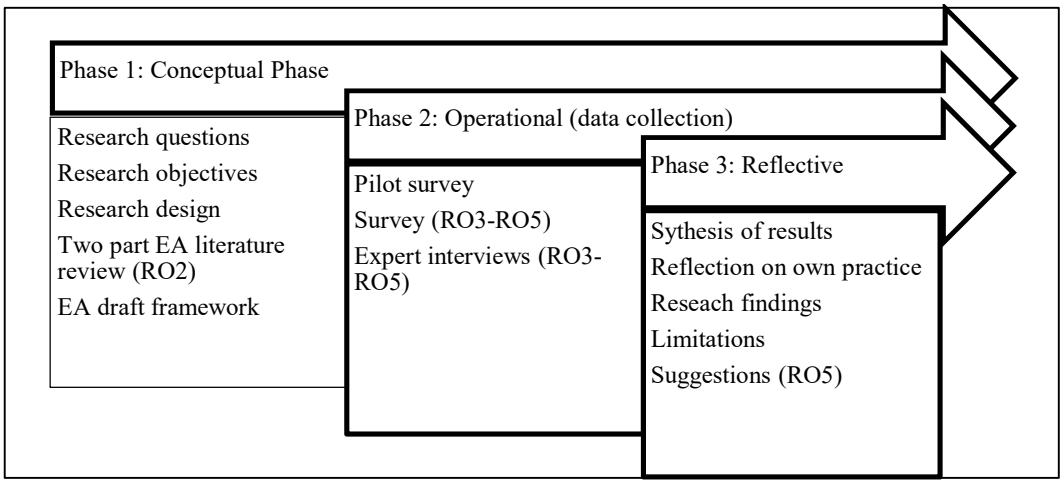


Figure 1.2: Schematic overview of the EA-ISOLL research methodology

1.6 Summary

This first chapter of the thesis articulated the EA problem and its significance in the context of informal synchronous language learning (ISOLL). It then identified four subsidiary research objectives (RO) to accomplish the main one of resolving the EA-ISOLL conundrum (RO1). These milestones involved the definition of EA in the informal learning field (RO2), ascertaining its influence in various contexts (RO3), illuminating its constituents (RO4) and reflecting on its pedagogical implications (RO5). The first chapter then sketched three research phases: conceptual, operational and reflective.

In an era of unprecedented technological change in educational landscapes, this thesis enriches L2 /LX and wider pedagogic discourse and informed teaching practice to enhance the online learning experience of language students. It focused on the role and constituents of emotional attachment for informal synchronous online language learning (EA-ISOLL).

Chapter 2 following presents a structured literature review of learning and emotional attachment to generate an initial explanatory framework. The chapter is split into two parts with the first section dealing with the learning literature and the second one with the emotional attachment. Chapter 3 outlines an appropriate methodology. Subsequent Operational Phase investigations in Chapter 4 & 5 investigate the significance of context, EA and other putative learning factors (RO3) as well as isolating EA's constituents (RO4). The final, reflective chapter refines and validates the EA learning framework and teases out useful pedagogical findings for learning stakeholders (RO5).

Chapter 2 Literature review

The literature review prioritised relevance and so focused on seminal material relating to the RQ (Maxwell, 2012). It aimed to selectively "employ the literature artfully to support the choices made for this study not to educate the reader in the state of science in the problem area" (Locke, Silverman, & Spirduso, 2009). The literature was split into two main sections. Part A dealt with learning and language learning theory while the second part reviewed emotional attachment for the genesis of the draft framework.

Part A: learning and language learning theory

2.1 Overview

This first section of the literature review chapter articulated the concept of EA and introduced the motivation for the research. It set the scene by briefly considering some of the literature surrounding learning and emotions and outlined the research structure, outcomes and contributions. This second chapter presented a structured literature review of learning and EA to answer RQ1. The review articulated the main learning considerations for classroom, blended, or online learning contexts. With the learning backdrop somewhat clearer, the chapter clarified the meaning of EA for ISOLL (RO2) by, harnessing the psychological, marketing and learning literatures. Then, the chapter harnesses the literature to identify EA's constituents for a draft informal synchronous online language learning (ISOLL) framework to structure subsequent operational investigations for RO3 and RO4. Figure 2.1 illustrates how Chapter 2 fits into the structure of the thesis.

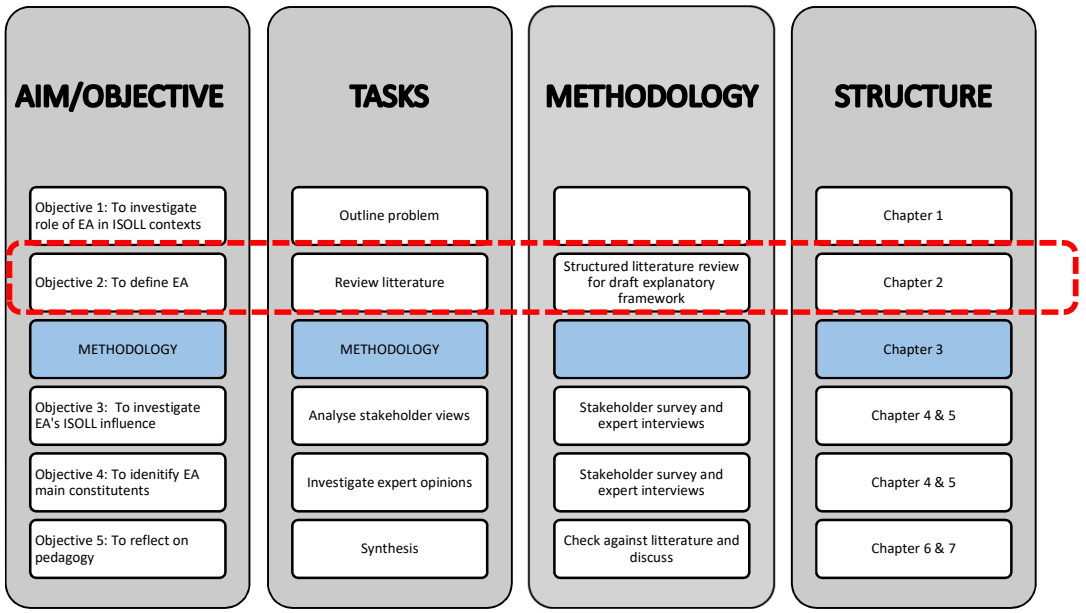


Figure 2.1: Chapter 2 within the thesis structure (Source: Author, 2017)

2.2. The learning context

Since the 1990s post-colonialism, globalization, migration, trans-nationalism and crucially, technology, have, at least superficially, transformed language and other learning environments. Notwithstanding, for Bourdieu & Boltanski (1975) language still retains its socially repressive function of "*domination symbolique*" (symbolically domination) (p.5). Nowadays, e-language learning (e-LL) has spawned a significant industry (Block, 2003; Byram, 2008; Heller & Martin-Jones, 2001; Pavlenko, 2001). Notwithstanding technology, it is necessary to dissect the seminal insights from the mainstream teaching and learning literature for a complete answer to the EA main research question:

How does EA enhance second language learning in diverse informal synchronous online learning contexts?

The literature on teaching and learning is substantive and spans many decades (Bandura, 1977; Bloom, 1956; Dewey, 1938; Felder, 2002; Kolb, 1984; Krathwohl, 2002; Vygotsky,

1978). Today, the pedagogical role of computers for learning is obvious and widely accepted. Carol Chapelle (2001), considers herself a leading authority on Second Language Acquisition (SLA) or L2/LX but an enthusiastic sceptic about computers. SLA involves, "additional language learning at any point in the life span after the learning of one or more languages has taken place in the context of primary socialization in the family (Fir Group, 2016, p.21). The Group conceptualise SLA as taking place through a series of interactions in three domains of social engagement: micro, meso and macro. The interpretation of micro or individual sense phenomena is shaped at a macro level by political economy and society and at the meso level by institutions and communities (family, school, neighbourhood, places of work & worship, clubs, community sports leagues, political parties, online forums etc. Social conditions (e.g., economic, cultural, religious, political) pervade meso level institutions and shape linguistic identities by regulating investment, agency, and power. Together, these institutions, communities, conditions, and possible identities provide or restrict access to types of social experiences.

The final L2 influence is macro level belief systems, cultural, political, religious, and economic values. Ushioda (2008, 2011) agreed that learning involves a process of maturation influenced by a complex interplay of internal and external factors such as surroundings, university-built form, socioeconomic status, community support, school leadership, teacher competence and student motivation. Languages involves meaning, embodiment, and self-adaptive local emergence of patterning. Learning involves mutual entailment of the cognitive, the social, and the emotional rather than primarily cognitive phenomenon. According to Vygotsky (1962; 1968), learning to use semiotic tools (such as signs, analogies or allegories and symbols) is a socially mediated and evolutionary process. Linguistic micro-genesis involves iterative community collaboration to activate and enrich internal biological endowments. In recent decades, technology has significantly influenced

language micro-genesis (Yeh, Tseng & Chen, 2019). Sandholtz (1997) outlined some of the complex factors affecting the effective use of L2 learning technologies such as teaching competence, teaching methodology and learning intensification, whilst Downes (2010), suggested how new gaming or other technologies can weave together disparate episodic learning events in a distributed environment for more engaging, immersive and interactive learning. Research suggested that a host of social, cultural and other factors contribute to L2 learning, including foundational study, motivation, culture, literacy development and student interaction routines and practices (Dörnyei, 1998; Heath, 1983; Peters & Boggs, 1986; Schieffelin & Ochs, 1986). However, despite this increased interest in appropriate configuration of online learning technologies, the role of EA in informal e-LL communities remains under-researched.

To help understand learning system complexity, Cleveland-Innes and Wilton (2018), used a Complex Adaptive Blended Learning System (CABLS) framework, centred on the learner-instructor(s) with dynamic and integrative technological and institutional support. Successful learning depends on understanding the system and its students. In a CABLS there are six interacting constituents: learner, teacher, content, learner support, institutions and technology that contribute towards learning progression or "a carefully sequenced set of building blocks that students must master *en route* to mastering a more distant curricular aim" (Popham, 2007, p.83).

2. Online language learning

In terms of technology, Lee (2019) used Benson's (2011) framework to articulate and examine the impact of informal digital learning of English in terms of formality, location, pedagogy and locus of control (to what extent language learners are self-directed). Lee (2019) found informal digital learning of English was significantly correlated with

confidence and enjoyment but not with productive language outcomes (speaking or standardized tests scores). In short, learners spending time playing online games or chatting on Facebook or on other informal activities is not necessarily conducive to achieving L2 outcomes. Instructors need to guide students to make informed decisions about time allocation and digital resources.

Research on electronic or online L2/LX learning (e-LL) suggests that various factors contribute to learning, including foundational study, motivation, culture, literacy development, socialization and student interaction routines or practices (Dörnyei, 1998; Heath, 1983; Peters & Boggs, 1986; Schieffelin & Ochs, 1986). For electronically delivered L2 generally, there is a significant variation in both terminology and substantive pedagogy. For Luskin (2010, p.1), the "e" in e-LL implies not only "electronic" but also "exciting, energetic, enthusiastic, emotional, extended, excellent, and educational". Others have suggested that the "e" should refer to "everything, everyone, engaging, easy" (Parks, 2013, p.1).

In countries like Australia and the UK, learning support, beyond English language training such as Additional Language or Dialect (EAL/D) enhances achievement and social and personal development. In the US, Canada, Australia and New Zealand the term used for English as a second language is ESL. It is worth noting that ESL learners learn English in English-speaking countries while EFL learners learn it in non-English-speaking countries. Although many EFL students speak several languages, they still require socialization in English usage (Schieffelin & Ochs, 1986).

Whilst some aspects of second language pedagogy remain contested, like optimal timing or problem-solving vs. phonetic approaches (Krashen, 2003), the literature confirms activities in the target language is critical. Nonetheless, UK government reviews, underpinned by

extensive and extended (3 years) L2 lesson observations since 1993, repeatedly found limited spontaneous L2 pupil-teacher conversations (OFSTED, 2011). The government inspectors recommended teachers encourage L2 spontaneously usage, so students can make up their own sentences and speak creatively. To internalise implicit knowledge, DeKeyser (1998) and Hill and Miller (2013) advocated L2 practice after explicit knowledge transmission. In contrast, Krashen (1982) and Ellis (1998) extoled the benefits of meaning-focused communication. The L2 literature cited above is clear that L2 guides need to ascertain student's situation, identify needs, give clear and explicit instructions and engage pupils in a range of adapted communication activities.

2.3.1 Blended, online and informal learning

Graham, (2006) emphasized the significance of computer-based technologies and defined blended learning as the "convergence between traditional face-to-face learning environments and computer-mediated (or distributed) [ones]" (p.6). For him, blended learning is flexible, enables access and transforms learning.

Online learning is described by most authors as learning that occurs in a specific web-based (Benson, 2002; Carliner, 2004; Conrad, 2002). However, there is no clear agreement on definition of online learning in academic literature. Some describe online learning as wholly online learning (Oblinger & Oblinger, 2005), whereas others refer to the technology medium or context with which it is used (Lowenthal, Wilson, & Parrish, 2009).

Although computers are integral to online learning, for now they work best in conjunction with competent instructors and properly configured educational programmes. However, technology is evolving rapidly and stand-alone L2 platforms, like Duolingo or *Rosetta Stone* enable students to learn a language without any instructor. *Rosetta Stone* uses voice-

recognition software to continue conversation threads but still needs refinement and can frustrate and disengage students (Krashen, 2013). To foster engaged communities of learners, e-LL platforms need to put students at the centre of their own L2 learning and identify suitable subject matter and tasks that actively engages them (Anderson, 2003b; Mercer & Dörnyei 2020).

Informal learning goes back to antiquity when students would shadow masters like Socrates. More recently, Livingstone (1999) interviewed 1,562 Canadian adults and found that an astonishing 95% were involved in informal learning activities that they considered significant. The prodigious resources devoted to informal learning suggests education systems reform. On average, respondents devoted approximately 15 hours per week to various informal learning, involving e.g. learning about computer skills, renovations, cooking or household duties. For Livingstone (1999) informal learning is, "any activity involving the pursuit of understanding, knowledge or skill which occurs outside the curricula of educational institutions" without, the "presence of an institutionally authorized instructor" (p. 4) . Schugurensky (2000) divided informal online learning into self-directed or incidental (tacit) modes. Whilst for Livingstone (1999), informal online self-directed learners have no instructor but only intermittent support. Unlike self-directed learners, incidental ones have no prior intention of learning but realise afterwards that they have learnt something. Everyone learns tacitly during everyday life, when values, attitudes, behaviours, or skills are inadvertently absorbed. Sometimes, when we reflect, this daily inadvertent or tacit learning becomes more conscious. Informal learning, whether self-directed or incidental usually occurs without much external facilitation or structure (Marsick, & Watkins, 2001). For these authors, there are two main drivers of informal learning: critical reflection about tacit knowledge and beliefs and a proactive or creative engagement with new opportunities or technology. However, oftentimes even reflective and creative informal learners can stagnate

or get into a learning rut. Paradoxically, for Tough (2002) informal learners are generally more sociable, compared to classroom learners. Generally, informal learning is sparked by a need, motivation or opportunity but must overcome cultural, and policy social barriers (Livingstone, Raykov, & Stowe, 2001). Overall, the literature suggested that second language blended learning is no silver bullet for learning progression, and, in fact, its proponents confront some of the same issues articulated by the pioneers of social learning theory (Chomsky, 1986; Vygotsky, 1978).

2.3.2 Language learning and e-LL

Common acronyms associated with language learning and its e variant includes second-language acquisition (SLA), teaching English as a second language (TESOL), ESL (English as a Second Language) in English-speaking countries, EFL (English as a Foreign Language) learnt in non-English-speaking countries. Applied linguistic research investigates language errors and investigates how online, classroom or work milieus influence students' L2 learning and experiences or how sexual minorities appropriate language to structure their workplace, gender or online language identity and (Heigham & Croker, 2019).

In the educational setting, Merrill Swain (2019) shifted the focus of L2 pedagogy from comprehensible input to gaps student's generation of culture mediated L2/LX outputs, driven by the need to communicate and collaborate with peers to complete tasks. She used the notion of *languaging* as an overarching framework to understand student language learning (process) and her focus was the collaborative dialogue needed to complete linguistic tasks (output) (Swain, 2019). Task Based Language Learning as advocated by, for example, Ellis (2017, 2019), spans a continuum from Task Supporting Language Teaching which involves student needs-analysis to help shape relevant tasks and incidental learning to more explicit

instruction and focused tasks especially were L1 blocks intuitive L2 lexical, semantic or syntax understanding for structural or anthropological reasons. Ellis (2017) argued for a hybrid L2 syllabus of task-based and task-supported teaching, such as written feedback or referring to a corpus of literature (collection of relevant works) to address specific technical linguistic issues that emerge from interaction.

Ellis (2017) noted that feedback itself is a contested pedogeological topic in TESOL and wider L2 learning. Conventionally, L2 instructors provided explicit feedback during intentional learning but the alternative is for more implicit commentary during incidental learning to prompt student outputs. A compromise is to provide explicit grammar rules in response to emerging problems that arise during communication tasks. Pragmatically, some L2 tasks have no situational but only interactional authenticity and others are simply consciousness-raising activities to help learners advance their metalinguistic understanding (Ellis, 2017).

In one-on-one informal synchronous L2 learning context, task-supported language teaching can involve relevant incidental rather than explicit learning tasks such as suitable digital games, although evidence for their pedogeological efficacity seems, as yet, inconclusive (Chang &Yang, 2015; Hannibal Jensen, 2017, 2019; Lee, 2019; Olsson & Sylvén, 2015; Sundqvist, 2009; Sundqvist & Sylvén, 2014, 2016; Sylvén & Sundqvist, 2012).

Mirroring informal learning, informal e-LL involves the online pursuit of language knowledge or skills without an external formal language curriculum (Livingstone, 1999) but with some degree of instructor guidance. Like its more general counterpart, informal e-LL can either be self-directed or incidental/ tacit (Schugurensky, 2000). In its self-directed mode, e-LL can involve the online interaction with experienced language practitioners although not within a formal programme of studies (Martín-Monje, Castrillo, & Mañana-Rodríguez,

2018). Today, learners use the Internet, social media or technical tools to learn informally outside formal educational institutions. Informal online learning gives learners autonomy (Downes, 2010), but often without formal accreditation or assessment protocols. As with formal learning, social learning theory suggested instructors in informal settings should actively engage with student knowledge construction. Informal second language constructivist teachers encourage students and evaluate activities. In Kolb's (1984) Experiential Learning Theory and reflective learning approaches, students learn how to learn and become expert learners. The precise definition of informal e-LL is contested (Hauske & Bendel, 2007) although a purely technologically enriched learning environment is insufficient. Attwell (2007) suggested that informal e-LL applies technology within an unstructured personal learning environment using collaborative interaction or delivered via a personal tutor. Common technology applications include Web 2.0, various social software and mobile applications. In contrast with traditional teacher-centred paradigms, e-LL adopts a more social constructivist learning one (Creanor, Trinder, Gowan, & Howells, 2008; Morgan, 2001). Informal e-LL excludes MOOCs because of their structured design, formal assessment and limited interaction. In contrast, informal e-LL is flexible and gives students a degree of autonomy to re-configure course design and direct content and pace of learning.

Lai (2017) provided useful review of autonomous learning outside as opposed to inside the classroom and stresses its growing importance. For Benson (2007), autonomy involved both capacity and situational freedom but also interdependence. Boud (1988) collated contemporary methods to enhance autonomy e.g. learning contracts, working in pairs, student-planned courses; peer support systems; and collaborative assessment

One important aspect of autonomous L2 learning is the consultation a *corpus* (plural: *corpora*) or collection of texts by students, including of course dictionaries or relevant books or articles. Online L2 instructors can also direct students to *corpora* when providing written

feedback student work. Students can engage with language corpora as part of data-driven learning to independently immerse themselves in culturally relevant contextual sources and resolve L2 written errors (Storch, 2018). Also, even in, so-called, informal situations, L2 instructors can provide Written Constructive Feedback (WCF) via online posts or comments in PDF or Word texts sent as email attachments. Whilst WCF can facilitate effective corpus consultation for L2 error resolution informal online instructors need to use it selectively. Sometimes indirect WCF (i.e. simply flagging an error without explaining it in detail) stimulates student corpus consultation engagement more than direct WCF. However, unless students have enough contextual information indirect WCF can confuse error location, depending whether lexical or grammatical issues are at play. Hence, L2 instructors consider the use of corpora beneficial for error resolution, teachers need to carefully consider the appropriate WCF mode (Crosthwaite, Storch, & Schweinberger, 2020).

Whilst it seems clear that informal and formal learning systems should foster reflexive critical thought beyond information consumption or skills acquisition (Lou, Shih, Tseng, Diez, & Tsai, 2010). The literature suggested that modern informal e-LL should harness appropriate technologies sessions, engage energetically and dynamically with students via interactive technolgies and authentic materials which appeal to learners' auditory and visual rather than tactile senses (Gilmore, 2007; Wilson, 1997). In informal online settings, students look for stronger emotional support via intensive teacher interactions. (Shen, Wang & Shen, 2009).

2.3.3 Learning motivations, interactions and activities

Maslow's (1968) influential theory implies that people can only be motivated to learn languages once their basic needs (food, shelter, etc.) are satisfied. For Dörnyei (1998),

motivation underpins L2 pedagogy which contrasts with the ideas of Bourdieu (1979), where individual agency plays less of a role in learning success compared to socio-cultural conditioning. Dörnyei (1998) ignored this sociological contention and, instead, focused on practical L2/LX issues. He urged instructors to foster a positive language learning experience that supports and promotes group solidarity and lower levels of anxiety. Students are motivated when they collaborate with other students from diverse cultural backgrounds to achieve a language task. It is the driving force that stimulates student engagement, perseverance and investment (Dörnyei, 2020; Mercer & Dörnyei, 2020; Ushioda, 2008, 2011). Engagement provides a unified concept and "shows that motivational drive has succeeded in cutting through the surrounding multitude of distractions, temptations and alternatives." (Mercer & Dörnyei 2020, p.6). For these two Nottingham-based authors, engagement is active, holistic and practical. Rather than merely creating a facilitative online learning environment, L2 instructors need to ensure that the students' positive disposition is realised in actions, rather than being "hijacked by the plethora of other pressing and ever-salient distractions" (Mercer & Dörnyei, 2020, p.6). To engage their learners, even, so-called 'informal' L2 online lessons must put learners not at centre of teaching but, rather, at centre of their *own learning* so that they themselves help shape online interactions. Engagement means not only active participation and involvement in academic tasks but also, ideally, internal cognitive and affective (emotional) L2 involvement.

L2 learning is a complex dynamic system where the environment, cognition (i.e. thoughts), motivation and affect (i.e. emotions) interact to foster engagement and learning (Dörnyei, 2009; Fredricks, Blumenfeld & Paris, 2004). Leontev (1978) was a pioneer in looking at community and social interactions, where individuals have different roles and interact in accordance with explicit or implicit social rules. For Engeström (1987) human action and learning is mediated by semiotic, cultural, social and institutional practices and

interactions. Conditioning even shapes incidental learning on computer games or mobile apps, but activity execution varies, depending on peer-group relationships and orientations (Coughlan & Duff, 1994; Lantolf & Thorne, 2006; Lompscher, 1999). Some students engage with L2 learning to cement group relationships or out of curiosity. Other students want to pass exams or gain certifications. Leaners clearly act on motives of personal significance to them rationally or emotionally (Lantolf & Pavlenko, 2001; Lompscher, 1999).

Practically, Mercer and Dörnyei (2020) argued that malleability and friendliness are crucial qualities for LX engagement. For Jang, Reeve and Deci (2010) when students do engage "there is almost always some aspect of the teacher's behaviour that plays a role in the initiation and regulation of the engagement" (p. 588),. In America, these authors investigated Grades 9–11 engagement in 133 public high school classrooms found that structure and support improved student engagement and autonomy. It is likely that structure and support that fosters EA will help with ISOLL.

Digitally, Pham and Chen (2019) found that LX mobile apps such PACARD (Personalized Adaptive CARD-based interface) significantly increased student online engagement and English learning. For language learning, interactions to complete activities are important for learning (Lompscher, 1999) but motivations can be unstable and fluctuate, especially if a student's learning experience jars with their values (Lantolf & Thorne, 2006; Nardi, 1996). One possible LX motivator involves identity or the desire to integrate with a specific ethnolinguistic community (Gardner, 1988) or connect to a wider, global community (Ushioda, 2008). However, whilst identification with target culture can motivate, learning also needs investment in time and effort (Dörnyei, 2009).

SCT stresses the importance of culture but also relationships and interactions. Wagner (1994) defined interactions as "reciprocal events that require at least two objects and two

actions. Interactions occur when these objects or events mutually influence one another" (p. 8). Moore (1989, 1993) considered three core types of interaction essential for effective online ESL delivery: learner-content (learner with content), learner-teacher (learner with teacher) and learner-learner (learner with another learner).

Learner-content interaction largely refers to the process, where learners are studying independently of the teacher or the institution. Learners relate to or interact with content that results in changes in learners' understanding, perceptions, and cognitive structures. Learner-teacher interaction is the process where the teacher assists the students in interacting with the content (Moore & Kearsley, 2005), enabling them to draw on the knowledge and experience of the subject expert and stimulating their interest. It can occur in both synchronous and asynchronous forms (Moore & Kearsley, 2005). Instructor knowledge and experience should stimulate interest, should motivate, and should provide additional explanation and support. Learner-learner interaction described by Anderson and Kuskis (2007) as a social aspect of support and motivation where "the act of engaging in learner-learner interaction forces learners to construct or formulate ideas in deep sense" (p. 297).

Expanding Moore's (1989) model, Anderson (2003a) included three extra categories: teacher-content, teacher-teacher, content-content interaction. Figure 2.2 illustrates these combined categories. The categories identified by Anderson (2003) add an interesting complexity to the previously cited interactions from Moore (1989).

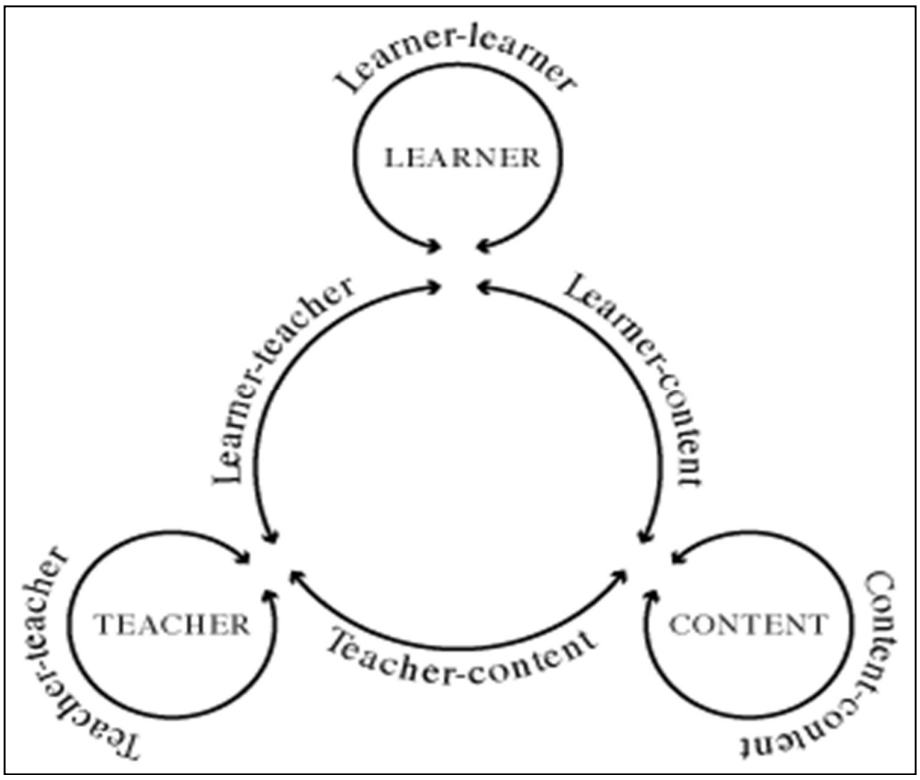


Figure 2.2: Model of online educational interactions (Anderson, 2004, p.58)

Teacher-content interactions can involve adapting technology to improve pedagogy. Teacher-teacher interaction fosters sharing resources and experiences. Content-content interaction in the form of computer programs which can "retrieve information, operate other programs, make decisions, and monitor resources on networks" (Anderson & Kuskis, 2007, p. 304) is in the early stages of development and relies upon the work of multidisciplinary teams which include computer scientists, linguists and educators. This type of interaction could provide more learner autonomy in the form of increased self-management and self-monitoring, consistent with self-directed learning.

A particularly important interaction in learning is that of assessment which is broader than testing (Green, 2014). Assessment should probe learners' capabilities and help L2 instructors identify critical functional language gaps (e.g. inability to establish rapport in the culture or purchase items and services).

Positive interactions help close what Moore (1993) called "transactional distance" between student and instructor and help to build EA. Transactional distance is a pedagogical hindrance, caused by geographical, social or cultural separation. Instructors can bridge it by programme/module structure and culturally appropriate interactions (Garrett & Baquedano-Lopéz, 2002).

EA is linked to positive interactions, including assessment. One way to foster positive interactions and strengthen relationships is to close down various transactional distances. To improve these interactions, the literature suggested several techniques, including making implicit knowledge more explicit (DeKeyser, 1998) or improving communication with simpler and more meaningful language (Krashen, 1982; Ellis, 2005).

Just as commercially, motivation is influenced by corporate culture (Etzioni 1975), so too in linguistic learning, student's motivation for second language study is influenced by both the target language culture and the indigenous one (Valdes, & Swan, 1986). The review of literature on EA identified Wundt (1920), Vygotsky (1962) and Bandura (1977) as central to understanding human cognition, attachment, learning and development. These authors all stressed the importance of appropriate cultural and social milieus for proper learning and development. For Bandura (1998), these nurturing milieus fostered a positive disposition and optimism, essential for "personal efficacy to override the numerous impediments to success" (p. 56) Culture as collective conditioning and arbiter of meaning underpins both individual learner psychology and the meaning of language. Culture also influences the nurturing bonds of affection or relationship strength that support structured learning. Target language cultural understanding could influence language learning by engaging and motivating learners but also enabling them to better interpret the target language. To evoke and channel emotions, instructors need to engage students with culturally relevant problem-based materials for states

of language learning flow. The review of learning-EA literature suggests that EA involves various indicators like trust, love, fear and hope.

Without motivation or positive emotions towards their studies, students can lose interest. For Ormrod (2008), motivated learners have specific educational goals, concentrate and persistently seek to improve their own performance. Excessive pressure on students to achieve results without considering student motivation though are misguided and can lead to adaptive malfunction, unhappiness or illness. To flourish, students need supportive antecedent conditions, involving a calm atmosphere and structured learning programme. Emotion and motivation are intervening variables which only indirectly affect behaviour or outcomes. In short, "when trying to motivate others, what is easy to do [e.g. shouting at or haranguing students] is rarely what is effective" (Reeve, 2014, p.16).

Conceptually, motivation can be regarded as either intrinsic or extrinsic (Ryan & Deci, 2002) but it sits on a continuum (see Figure 2.5). When students are compelled to learn, extrinsic motivation is necessary.

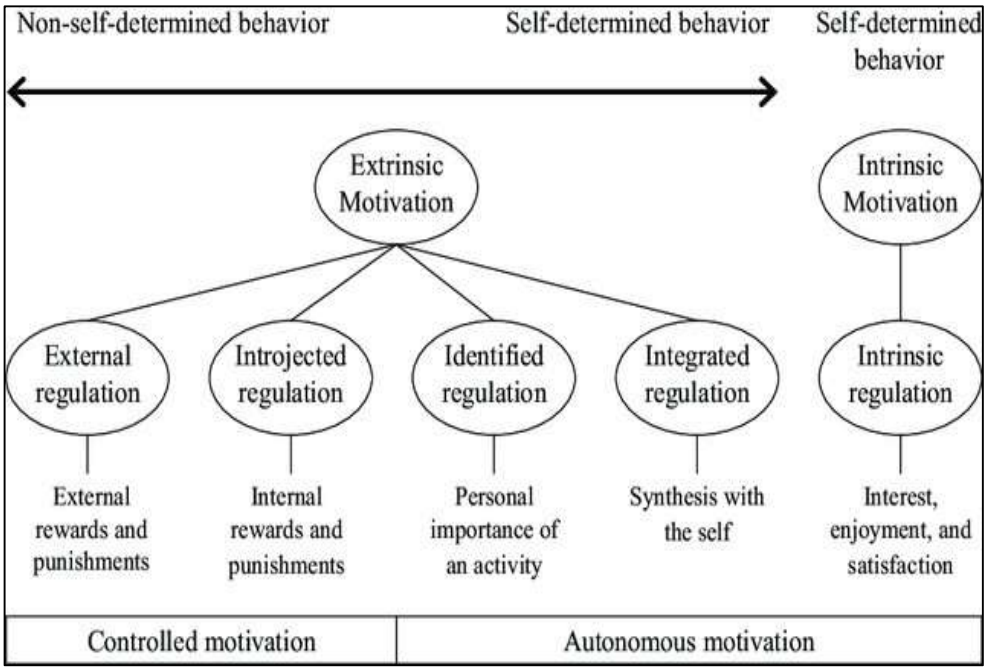


*Figure 2.*3 Self-Determination Theory. Adapted from Ryan & Deci (2002).

Research suggested that instructors can enhance learning and external motivation and bond students to courses in many ways (Baumeister & Leary,1995). Obvious steps include tailoring courses to student needs, ensuring lessons are culturally contextualized rather than obscure or abstract and, finally, interacting frequently and professionally with students. Ultimately, instructors need to wean students off extrinsic motivators and onto intrinsic ones like self-engagement in challenging but rewarding learning tasks. Possible useful factors to motivate students could include affection as engendered by friendliness, passion, or expressions of delight. Motivation is likely to build when students trust and feel connected by or some sort relationship or bond with instructors, and their peers in the learning community.

2.3.4 Asynchronous vs. synchronous delivery

An effective blended learning system to support active, lifelong learners requires careful design and planning of appropriate and scaffolded asynchronous and synchronous activities (Cleveland-Innes & Wilton, 2018). Asynchronous e-learning is recorded and available at any

time to students via video or audio media, social media, e-mail, texts, tweets or in discussion forums (Hrastinski, 2008). Synchronous e-learning, on the other hand, occurs in real time and is enabled by telephony or videoconferencing. It builds relationships and redresses imbalances of power by handing some measure of control to students who can direct the flow of interactive conversations with a "guide on the side" as opposed to acting as passive receptacles for wisdom from a "sage on the stage" (King, 1993, p.30). Using synchronous platforms, like *Teams* (Microsoft), *Zoom* or *WhatsApp* (Facebook), *FaceTime* (Apple) students can engage and become active participants in a dialogue that they help shape.

Notwithstanding significant concerns about the concentration of monopoly power, colonialism (Kwet, 2019) and privacy issues with social media platforms in "surveillance capitalism" (Zuboff, 2019), synchronous online learning can help connection; engagement and immediacy whilst asynchronous communication is more "suitable for reflection and discussion of complex ideas" (Hrastinski, Keller, & Carlsson, 2010, p.659). However, significant number of learners in synchronous discussions, can cause confusion because of multiple simultaneous responses. Using *Zoom* breakout chat rooms or one-to-one synchronous telephony helps breaks down cultural and social barriers because it offers a more private experience and empowers inhibited students to contribute their own ideas rather than acquiesce to dominant peers in more online collaborative learning environments.

The real strength of synchronous education in improving teaching and learning experience lies in its allowance "for immediate and timely feedback and creating a strong Social Presence (SP) more easily than asynchronous online environments" (Bates, 2005, p.188). Synchronous communication, through its immediacy and capacity for spontaneity, can replicate a real classroom and thus reduce the transactional distance between the teacher and learner. However, real-time improvisation requires an awareness of possible cognitive overload and considerable prior planning by second language teachers.

The review of online learning literature revealed a complex and evolving online learning backdrop with new opportunities for on-line interactions and feedback, reinforced by gaming or other engaging learning activities within an overarching interactive community.

2.4 Learning theoretical frameworks

The literature revealed a substantial number of learning approaches and potential frameworks. For pragmatic reasons, the research did not conduct an exhaustive review of all learning theories but homed in on the most fruitful in helping to shape the draft EA-ISOLL framework. Although SLT (Social Learning Theory) were briefly mentioned, there were not considered part of my research. However, the thesis did review Experiential Learning Theory (ELT), Reflective Teaching, Socio-Cultural Theory (SCT) and CABLS and CoI (Community of Inquiry).

2.4.1 Experiential Learning Theory

Carl Rogers (1967), thought that experiential learning was more relevant to learners than academic learning because it was personal, self-initiated and self-evaluated and with pervasive effects. He stressed the importance of external participation in learning rather than formal outcomes. Kolb's (1984) Experiential Learning Theory (ELT) broke down this type of learning into four stages in a cycle: concrete experience, reflective observation, abstract conceptualisation and active experimentation. Figure 2.3 illustrates how these stages interact.

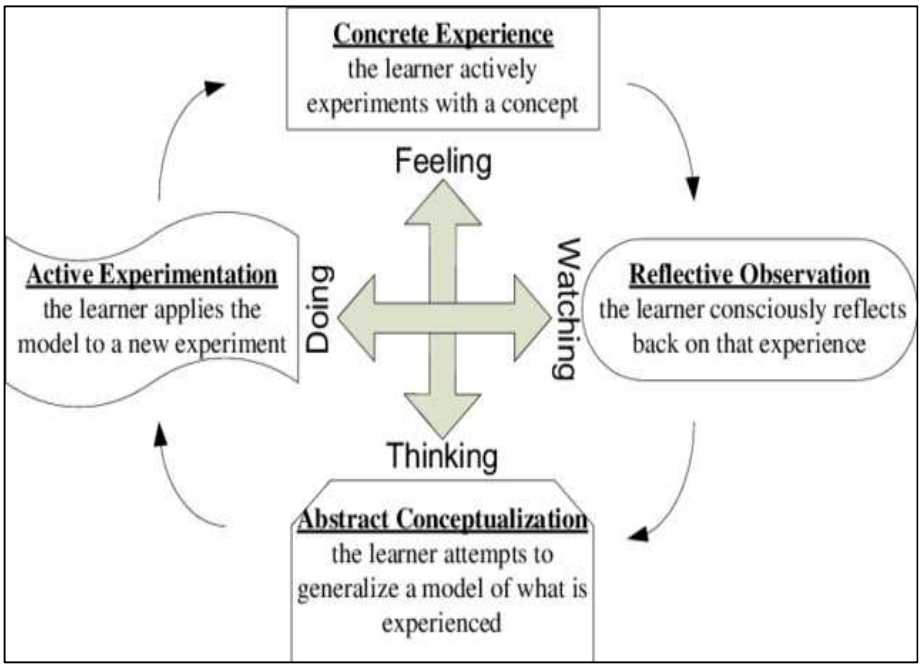


Figure 2.4: A model of ELT cycle, (Kolb, 1984).

For Kolb (1984), the key to learning is active involvement of students that begins with a concrete experience or task (for example, icebreakers, team games, problems, discussion or practical exercises). Students then reflect on these activities or take time-out from doing and step back to question or verbalize and discuss their experience. Activities to aid reflection include writing reports on what took place, providing feedback to other students or complete a learning log or diary. The next sequence in the ELT cycle is Abstract Conceptualisation is where students interpret events, drawing on theory, textbooks and ideas from colleagues. Finally, students apply their new understanding to predict or develop fieldwork or experiments. In the ESL context, ELT suggests that L2 instructors need to engage students by giving concrete pragmatic and culturally relevant examples students reflect on their learning, apply and internalise knowledge.

2.4.2 Reflective teaching

Kolb's (1984) ELT review above touched upon reflection for learners but it is also an important consideration for instructors. For Cartwright and McGregor (2013) and Pollard (2002), reflective teachers are wholehearted, open-minded, collaborative, creative and active. To develop professionally, they continuously monitor, revisit and reflect on teaching practices. Shulman (1987) urged instructors to mould a social teaching identity by continuous reflection on subject content, curriculum, pedagogy, educational values and to identify and enact what works well. In short, instructors must embed the habit of lesson reflection within their teaching practice.

2.2.3 Socio-cultural Learning Theory (SCT)

Vygotsky developed SCT in the 1930s when he realised that child development is both a social and cognitive process, mediated by socio-cultural conditioners.

> *Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (inter-psychological) and then inside the child (intra-psychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relationships between individuals.* (Vygotsky, 1978, p.57)

For some tasks children require active guidance and educators are most effective when they temporarily assist them in the Zone of Proximal Development (ZPD). Assistance should be scaffolded or tailored to the child's progression. Learning occurs when socially mediated behaviour is psychologically internalised into a transformative conscious experience[4]. It is important to note that SCT has some off-shoots that were not central to my thesis focus,

[4] In Russian 'Переживание'

including Bourdieu's (1979) notion of cultural capital, Bandura's (1977) SLT and cultural-historical approaches to distributed cognition (Engeström 1987; Cole & Engeström 1993).

Given its ontology, epistemology and methodology, SCT is a constructivist rather than positivist paradigm (Guba & Lincoln, 1994). In SCT, communities construct language during iterative dialogues in idiosyncratic cultural and historical settings. Vygotsky argued against testing student knowledge to determine intelligence. Rather, the focus should be on independent or collaborative problem solving because learning involves cognition and emotions in a complex socio-cultural system of interactions that lead to cognitive transformation or conscious experience – that Vygotsky called *perezhivanie* or conscious transformation (Mok 2017, Veresov 2017). In other words, learning has cognitive and social dimensions (Chomsky 1986; Vygotsky 1962, 1978). The implication is that students learn languages best when they are socially, cognitively and emotionally engaged in collaborative tasks. However, for Bourdieu (1979), the ability to learn also depends on cultural and social capital "*préalablement investi*" (p. 3) (previously invested). Notwithstanding sociology, relationships and semiotics (symbolic representations) should align with learning tasks (Jack, 2000).

The SCT and e-LL technology literature suggested student-centred and flexible instructor-learner interactions should be supported by innovative language teaching methods echoed in the research of Tochon (2014). Overall, the SCT literature provided some useful insights to help understand how socio-cultural and student-centred considerations can improve e-LL.

2.4.4 Community of Inquiry

For Garrison (2007), learning takes place in participatory interactions in a Community of Inquiry (CoI) which is a group of learners and educators with a common intellectual focus who collaborate and interact or share practice, moderated by Social Presence (SP), Cognitive Presence (CP) and Emotional Presence (EP) (see Glossary and s 7.7.1-4). Interactions in the CoI, mediated by TP, SP, and CP fosters deep and meaningful (collaborative-constructivist) but participatory learning experiences (Garrison, Anderson & Archer, 2000). Cleveland-Innes and Wilton (2018) integrated the CoI with CABLS to help understand blended learning interactions. Garrison's later (2012) work identified emotional attachment as one constituent within learning communities. CP is the opposite of Festinger's (1957) *Cognitive Dissonance* and involves internal psychological consistency based on the higher-level integration of diverse discipline or lexical manifestations for learning. Effectively, CP involves deep and meaningful learning (see 2.6.3). In this sense, appropriate Emotional Attachment, but not anxious attachment, feeds into SP (Artino, 2012; De Marrais & Tisdale 2002). Rienties and Rivers (2014) adaptation of CoI makes the association between EA and SP explicit and envisages Emotional Presence (EP see 2.6.4) interacting with SP to foster 'learning climate', with TP to enhance learning feedback.

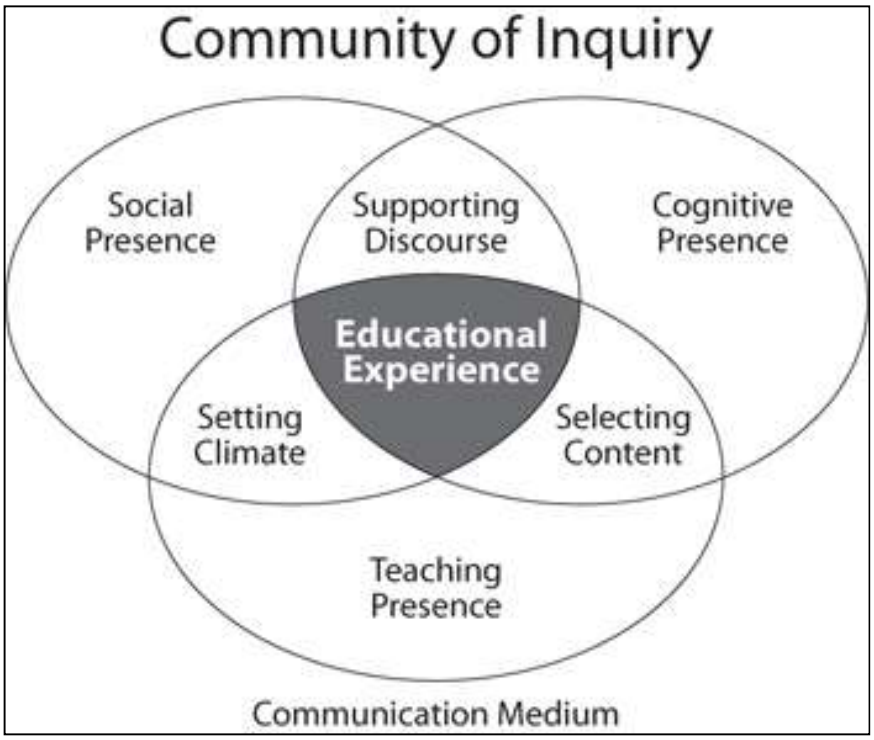


Figure 2.5 Social, Cognitive and Teaching Presences, within a Community of Inquiry (CoI), (Garrison, Anderson, Archer, 2000).

The CoI takes a constructivist perspective on knowledge, constructed in the dialogue or educational transactions between instructors and learners (Akyol, Arbaugh, Cleveland-Innes, Garrison, Ice, Richardson & Swan, 2009). Paradoxically, deep language learning is strengthened by reducing content (Ramsden 1983) to discourage surface learning that leaves language students with a sketchy and confused knowledge. So, although they may be able to replicate content, they have neither digested or integrated it and would not be able to use the target language in an unfamiliar situation. Rourke and Kanuka (2009) argued that the CoI framework lacked supporting evidence because much of the research evidence underpinning it relied on student learning self-assessment which is questionable but also because CoI approaches to teaching can neglect deep and meaningful learning. For these authors, students in CoI tend to focus on superficial retention needed to pass assessments rather than deep and meaningful learning. For Garrison and Cleveland-Innes (2005) the inter-relationship of TP,

SP and CP builds quality interaction, promoting discourse for deep and meaningful learning. In a L2/LX CoI stepped or progressive interactive formative activities with a portfolio of assessments provide useful learning feedback for L2/LX assessment that help build confidence and commitment, cement learning engagement and build positive emotions. In online CoIs, instructors should tune into students and build relationships, vested with meaningful professional and emotional bond. The draft EA-ISOLL framework should include SP and TP.

2.4.5 Conclusion

The review of learning frameworks was not exhaustive but covered those learning theories that offer useful insights for the development of my EA learning framework. The literature on learning raises questions about what constitutes L2 learning 'success'. There is a disjunction between "acquisition" and "participation" metaphors. In "participation" metaphors, the focus is very much on appropriately engaging in a language learning (process) and articulating culture mediated L2 dialogue to collaborate and complete linguistic tasks (output). In Experiential Learning, "success" involves transformation of experience that is difficult to objectively measure. In conventional, "acquisition" learning metaphors, "learning success" involves students achieving intended L2 learning outcomes. Out of this contention and the diversity of learning theories, SCT seems a fruitful hybrid that concurs with my own L2 and LX language teaching experience.

Part B: EA background, constituents and framework

2.5 Emotional attachment

MacIntyre (2002) suggested that emotions could underpin LX motivation and successful acquisition but, apart from investigations into the anxiety associated with using LX, he flags a lack of emotions and LX research. Fussell (2002) argued that the expression of emotions is a key motivation for LX acquisition both to cement interpersonal relationships and for individual well-being. However, although perhaps the, "ultimate challenge for LX learners and LX users" (Dewaele, 2010, p. 7) using swear words to express emotions in LX is fraught with cultural difficulties. This is mainly because, from a social constructivist perspective, emotions have a complex hierarchy of physiological, socio-cultural and linguistic interactions and are situated in a hierarchy of behavioural systems (Averill, 1982).

The linguist Dewaele (2010) accepted that emotions may have a physiological substrate but argues that idiosyncratic languages, with their built-in culture and concepts, mediate the cognition of language-specific emotional categories. Although emotions could underpin LX motivation their successful articulation involves sophisticated understanding of the socio-cultural milieu or *Völkerpsychologie* (MacIntyre, 2002; Wundt, 1920).

For Ishihara and Cohen (2014) culture is "a fuzzy set of attitudes, beliefs, behavioural conventions, and basic assumptions and values that are shared by a group of people, and that influence each member's behaviour and each member's interpretation of the "meaning" of other people's behaviour (p. 13). L2 usage is never "right" or "wrong". Instead, cultural norms mean it is preferred or appropriate in each context. However, objective culture and subjective culture need to be distinguished (Lantolf, 2000). Objective language culture involves institutional aspects, such as political and economic systems, art, or music and

cuisine. Subjective culture involves the learned philosophical, psychological and moral beliefs, values and behaviours shared by a language community. When lexical, grammatical, semantic and these ethnographic and cultural conditioners are ignored, linguistic CP, SP, TP and EP are likely to be depleted. In addition, communication and learning engagement also suffer (Fillmoren, 2003). Tochon (2014) echoed these reflections and traditional SCT, to note the critical importance of culture for learning socialisation. To conclude, the literature suggested that in complex adaptive learning systems, language culture is an important consideration for EA.

The notion of Emotional Attachment (EA) is found in the literature on psychology and marketing. It is an enduring internal psychological bond between learner and object (unit of analysis - parent, product, learning programme/module or instructor). Historically, rational thought, and by implication learning, is separate from emotions (Rienties & Rivers, 2014). However, recent experiments have undermined the notion that emotions are entirely separate from human cognition and learning. Emotions have direct physiological impacts on pulse and blood pressure, but also influence learning behaviour and second language achievement (Chen & Lee, 2011). Traditionally, EA literature centres on psychology or marketing but, in recent times, some learning-focused EA research has emerged. This study reviews each field in turn, looking to harness the literature to generate an EA explanatory framework.

2.5.1 Psychology

One of the main streams of literature on emotions and EA is in the field of psychology. According to attachment theory, the quality of early social or other attachments influences emotional state and behaviors (Mikulincer & Shaver, 2019). Bonds of attachment evolve between parents and children (Brassard & Johnson, 2016), sexual partners (Birnbaum & Reis,

2019), men and dogs (Blazina & Kogan, 2019) or consumers and their mobiles or other products (Vincent, 2006), along with places and subcultures (Schouten & McAlexander, 1995). The child's bond with its mother was the first attachment phenomena studied by psychologists. To interpret emotional attachments, psychologists realized that needed to understand the sociocultural context in which cognition occurred. Wundt (1920) *Völkerpsychologie* (social psychology) stressed the importance of the cultural milieu for understanding human behavior, including learning. For Wundt, "Higher psychological functions require additional cognitive resources that are to be found in the sociocultural milieu" (Cole and Engestrom, 1993, p.3). The psychology literature suggested that emotions are shorter, more intense and episodic than moods (Linnenbrink & Pintrich, 2002) and emotional attachment (EA) is more enduring than a mood.

Attachments, for example of a child to its parents, fulfill a profound evolutionary survival impulse but sits within the larger group of affectional bonds (Bowlby, 1969). Attachment bonds are innate child development drives that involve proximity or accessibility and attentiveness. Attachments vary in strength, and stronger ones are associated with stronger feelings of connections, affection, love, and passion (Aron & Westbay, 1996; Feeney & Noller, 1996). However, not all attachments are healthy. Aside from secure ones, there are anxious-preoccupied, dismissive-avoidant, and fearful-avoidant attachments often seen in family or romantic relationships. Attachment injuries can be treated by uncovering perceived threats or vulnerabilities to a partner's availability or responsiveness "hidden behind angry and defensive interaction sequences" (Kobak, Zajac & Madsen, 2016, p. 36).

EA is an enduring bond of affection with substantial intensity which is part of a motivational system, the attachment behavioral system, which emerged by natural selection to regulate proximity to an attachment figure. The desire to form strong emotional attachments to others is a basic human need (Ainsworth, Blehar, Waters & Wall, 2015). EA

is fostered or undermined by perceptions, information and knowledge as well as relationships with people, objects, and ideas (Bowlby, 1973; Gillath, Karantzas & Fraley, 2016; Huitt, 2009). For Bourdieu (1979), social structure shapes cultural capital and, therefore, learning. Individual agency, motivation, attachments and relationships are, for this French anthropologist/sociologist, subservient to the social dislocation caused by capitalism as it ruptures social bonds in traditional societies.

Among many other things, Bowlby (1969, 1973), studied the mental health of homeless children in post-war Europe, and articulated the different infant responses to separation. He noted that well-adjusted humans were confident in the accessibility and responsiveness of a trusted person. For Gillath, Karantzas & Fraley (2016, p.7) children "selectively cry, protest, maintain visual contact with a caregiver, reach upward to be held". Children who have built positive relationships with their parents are more autonomous and better able manage relationships or tolerate separation (Drigotas & Rusbult, 1992). Just as with learning, commitment to relationships involves a long-term perspective and a willingness to endure or sacrifice for delayed gratification or empowerment (Van Lange, Rusbult, Drigotas, Arriaga, Witcher & Cox, 1997).

The review of the psychology literature revealed the importance of attachments to parents, teachers and a diverse variety of objects, including mobile phones. Attachments are nurtured by relationships early development and autonomy. They are influenced by relationships within socio-cultural contexts and need to evolve as cultural capital builds and autonomy develops.

2.5.2 Business and marketing

EA also occurs frequently in both marketing and organization theory. Etzioni (1961) linked alienative; calculative; or moral emotional involvement to power modes in business organizations (coercive; utilitarian or symbolic). For Etzioni (1961), relationships thrive when power mode and emotional status align in coercive-alienative; utilitarian-calculative or normative-moral power duos.

In the marketing and business literature, consumers pay premiums for brands due to EA. Thomson, MacInnis and Whan Park (2005) used Factor Analysis to isolate EA as a second order factor. Factor analysis helps find hidden factors or dimensions that condense many variables into just a few latent ones. When Connection, Affection and Passion were rotated, the variance of underlying variables grouped together, suggesting that these factors were the main constituents of EA. They found EA distinct from Attitude, Involvement or Satisfaction and that it could predict brand loyalty and price premiums.

Affection was indicated by Friendly, Loved, Peaceful variables that "reflected the warm feelings a consumer has toward a brand" (Thomson, MacInnis & Park, 2005, p. 80). Passion was the second construct confirmed, split into variables Passionate, Delighted and Captivated. Connection included the items Connected, Bonded or Attached, which described a consumer's feelings of "being joined with a brand" (p. 80). Overall, this seminal paper on brand attachment illustrated that EA is a multidimensional notion constituted by Affection, Passion and Connection. Metaphorically, one can think of EA as a Russian doll with its constituent parts (Affection, Passion and Connection), themselves characterized by several indicators. Technically, EA and its latent constituents are unobservable and only modeled via their indicators.

2.5.3 EA and learning

Whilst EA emerged in psychology and is a prominent concept business, it is also relevant in higher education, post-compulsory education or informal learning because, without it, students could drop courses. In education, belonging or connectedness (attributes linked to EA), means students, "believe that adults in the school care about their learning and about them as individuals" (Blum, 2005, p. 16). In their seminal paper, Baumeister and Leary (1995) highlighted that the need to belong is fundamental to psychological wellbeing.

In the CoI, Emotional Presence (EP) involves the outward emotional expression such as displays of feeling and self-disclosure or general intensity of interactions and relationships (Cleveland-Innes & Campbell, 2012). Majeski, Stover & Valais (2018) discuss the paradox of EP as articulated in the CoI model where it is one of the fundamental elements for successful online learning along with TP, SP and CP. A limitation of the CoI-EP model is its articulation as emotional expression within SP. Majeski, Stover & Valais (2018) supplemented EP in both teacher and student with the broader notion of emotional intelligence (EI) that includes motivational and affective elements such as self-efficacy, openness, expanded self-awareness, heightened receptivity to others, and an enhanced ability to manage high arousal emotional states prevalent in complex L2 learning. EP which interacts with EP with TP, SP and CP. Unlike EP (CoI version), EA manifests internally in psychological states and externally via expressions and social interactions but, unlike EI, the EA locus is with students.

The distinction between EA and EP is echoed in the European Commission's Learning Analytics Community Exchange (Rienties & Rivers, 2014). As stated by Cleveland-Innes & Campbell (2012) EP is an outward expression of emotion, affect and feeling in a CoI, interacting with the learning technology, course content, students and instructor. EA mediates the dynamics of interpersonal relationships between teacher and learner (McCarthy,

Wright, 2006; Cleveland-Innes & Campbell, 2012). Kahu, Stephens, Leach and Zepke (2015) confirmed the influence of emotions for mature university student engagement (or disengagement) found earlier by Pekrun and Linnenbrink-Garcia (2012). EA could help course students feel secure, confident and more likely to explore his or her social learning environment. Without EA, course participants could experience anxiety, insecurity, despair and depression (Gillath et al., 2016). In teaching or guiding, emotions are ubiquitous and influence students' engagement and performance.

EA of students also influences L2 and other education sub-system effectiveness via student learning experience, perceived linguistic challenges and motivation. In education, some students even feel attached to their school (Libbey, 2004). The multimedia learning literature suggested that EA has some role in motivation and language learning (Stark, Malkmus, Brünken, & Park, 2018). The development and deployment of e-LL should incorporate pedagogical, cultural, practical and emotional considerations (Bates, 2003, 2005; Dewey, 1938; Felder, 2002). In real time ISOLL environments, where parties can have more flexibility in interaction (although issues of power, gender, culture and individual personality come into play), instructor content and tone cement or undermine education-critical personal relationships (Garrison, 2007).

The review of EA indicates it develops in a complex hierarchy of physiological, socio-cultural and linguistic interactions, including in learning communities where it mediates the dynamics of interpersonal relationships but differs from EP. Particularly early in the learning cycle, emotionally charged interactions can help motivate learners, strengthen new learning communities and build engagement (EA). To find out more, the thesis investigated the various EA constituents.

2.6 EA factors, constituents and components

Having reviewed literature spanning various aspects of learning and EA (in psychology, business and applied learning) the study identified 22 potential factors. Constituents are higher-order factors that include multiple components (lower order factors). Just as, in statistics with Factor Analysis (see s.2.5.2 above), factors condense many variables into fewer latent ones, so in the EA-ISOLL system, constituents bundle several lower order factors or components that work together to, influence L2 learning (O2), EA (O3) or have some pedagogical role (O4). Sixteen factors were considered before the EA-ISOLL framework separated constituents from, lower order, components. The review defined the factor, considered key literature and articulated its implications for L2/LX learning. Table 2.1. provides supplementary citations.

Affection

Affection is not just a fond or tender feeling (Pendell, 2002). Rather, it is a three-dimensional structure, where an interpersonal relationship is reinforced by the general perceptions and experiences of both parties (Aron & Westbay 1996, p.548). It plays a significant role in child development, parenting, couple relationships, adult well-being, and elder health. Pendal's (2002) emphasises a reciprocal need for positive regard from another but also a positive feeling towards him/her, communicated through affectionate behaviours. For online learning, Pendal (2002) stress on displays of affection is less relevant but students can become attached or disaffected with courses or instructors, so it makes sense for the survey to question them on this putative EA constituent.

Friendliness

Hays (1998) defined friendship as "voluntary interdependence between two persons over time intended to facilitate social-emotional goals of the participants, and may involve varying types and degrees of companionship, intimacy, affection, and mutual assistance" (p.395).

Friendliness involves respecting and accepting other people. Amongst siblings, conflict often occur in the presence of secure attachment figures, notably mothers (Hart, 2012). This paradoxical aspect of friendliness displays warns L2 or other instructors that, whilst friendliness underpins relational/responsiveness aspects of teaching, it can also incite disruptive peer behaviour. Friendliness underpins the warmth, nurturing or social dimension to teaching that balances its dominance or control aspect (Wubbels, Brekelmans, den Brok, & van Tartwijk, 2006; Walker, 2009). Because, friendliness underpins social-emotional needs, there is a strong argument for including it in I as the putative EA and learning constituent. Learners in a friendly situation are more likely to be engaged with their language studies (Sterling-Folker, 2020).

Connection

Emotions increase when people feel connected to others or products and services, including education. Thomson, MacInnis and Whan Park (2005), investigated a host of critical factors that influenced emotional attachment and brand loyalty to consumer products, including having a connection or link with the item. For Scheff (2011), emotional connectedness both causes and results from emotions. Human beings need to connect with others as much as they need air to breathe. Feelings of connection to language lessons are then likely to influence on EA and, for this reason, the putative constituent was included in the draft framework and in the questionnaire

Attachment

Attachments are a deep and enduring emotional bond between people or objects but the link between this technical psychological term and learning is not straightforward (Didau & Rose, 2016). In psychology, attachments are an evolutionary adaptation so, when threatened, a child seeks proximity to its caregiver (Bowlby, 1973). Proximity, accessibility or sensitivity underpin (Howe, 2006) development of attachments that shape personality

development. Even with early psychological supports, attachments can become anxious or insecure and development hindered (Ainsworth, Blehar, Waters, & Wall, 1978) so that subject become over sensitive or misread cues relevant to appraising and monitoring (Fraley, Niedenthal, Marks, Brumbaugh & Vicary, 2006). Such anxious attachments can fuel misbehaviour or misunderstandings. However, instructors should not conflate a normal range of attachments with inhibited or other attachment disorders because differences in attachment are not necessarily pathological (Gelso, Palma, & Bhatia, 2013; Didau & Rose, 2016). In summary, for EA-ISOLL, attachment, whether pathological or not, could influence learning.

Passion

Passion is commonly associated with romance, physical attraction, and sexual consummation (Sternberg, 1986). Feeney & Noller (1996) noted that when affectional bonds are at risk, passions are stoked. In the business field, the socially embedded factors driving entrepreneurial passion remain obscure (Murnieks, Cardon, & Haynie, 2020). In marketing, passion underpins brand love, loyalty, emotional connection, (Albert, Merunka, & Valette-Florence, 2013; Thomson, MacInnis & Whan Park, 2005; Batra, Ahuvia, & Bagozzi, 2012). Whilst the notion has several meanings, for this research it is considered a strong feeling that generates excitement, infatuation or obsession (Albert et al., 2013) that motivates or demotivates linguistic students' engagement, interactions and L2/LX investment.

Delighted

Delighted is an expression of a positive mood that can stimulate performance (Biss & Hasher, 2011). Macey & Schneider (2008) found that when candidates expressed it, they were more likely to be hired because people who are delighted with a company or job are more likely to engage. Similarly, language students who are delighted with a course will likely engage so the survey queried students on how delighted they felt about their L2 lessons. Feeling of being delighted in anticipation of the lesson or during the lesson is an

important motivational factor; hence it was included in the survey as a factor, although it was considered an unlikely constituent.

Trust

Trust is important for student outcomes and involves a sense of ease without anxiety or worry (Tschannen-Moran, 2017). For Hardin (1998) trust was an encapsulated interest, fuelled or extinguished during the knowledge acquisition process (Khodyakov, 2007). To trust partners, caregivers or teachers we need to appraise them to build confidence in their reliability (Mikulincer, 1998). In child development, trust is linked to self-disclosure so that high trust compensates for low privacy, and vice versa (Joinson, Reips, Buchanan & Schofield, 2010) but secure attachment relationship only develops in atmosphere of safety, security and trust (Bowlby, 1973). In sexual relationships, McElroy-Heltzel et al. (2019) found that honesty and fidelity build interpersonal trust needed to sustain a monogamous romantic relationship. In society more generally, trust is founded on strong personal or thin interpersonal or institutional ties that create, what Colemen (1988) and Putnam (2001) identified as "social capital". In business, trust strengthens successful customer brand and other relationships. Likley, L2/LX online asynchronous or synchronous telephonic interactions with students can help build trust and social capital that could improve learning.

Love

Love could centre on love of learning or the second language lessons or the instructor. The word "love" has religious, romantic, marketing or more general connotations. In marketing, it is a higher-order mental prototype with multiple cognitions, emotions, and behaviours beyond, brand attachment (Thomson, MacInnis, & Park, 1995). We need to distinguish episodic emotions from the love relationship (Batra, Ahuvia & Bagozzi, 2012). For the EA study, love is a strong attachment to a language, instructor or online lessons that motivate the student but, in the L2/LX context, any love feelings are tempered by

practicalities of the social context and acceptance of reality to avoid infatuation or pathology (Cambridge English Dictionary, 2020; Scheff, 2011; Batra, Ahuvia & Bagozzi, 2012).

Relationship

Relationship has several connotations, but this study's focus is the social sphere, although business or romantic aspects are considered. In this general social sense, relationships are the way people connect and behave toward each other, influenced by evolving knowledge and repeated interactions (Cambridge English Dictionary, 2020). A relationship is a more general and less psychologically technical term compared to various attachments (Didau & Rose, 2016). However, attachment style influences relationships so that, for example, anxious-ambivalent subjects tend to be less independent and look for commitment from their relationships. (Simpson,1990; Feeney & Noller 1990). For L2/LX learning, SCT, CoI and social capital literature suggests relationships are not only critical but, for CoI anyway, their evolution actually constitutes "learning". Of course, the literature warns us that language instructors will need to manage relationships professionally, especially with anxious students

Fear

Fear is an unpleasant emotion or thought, induced by fright or worry when confronted with danger or perceived threats or phobias (Cambridge English Dictionary, 2020; Meyerbröker & Emmelkamp, 2010). Anxiety is a broader and a more diffuse kind of fear. Vernacular usage of the term is so enlarged that fear masks other emotions, especially shame and humiliation or their anticipation (LaTour, & Rotfeld, 1997). Nevertheless, given the possibility of anxious attachment modes, L2 lessons could frighten some students and undermine their learning.

Hope

Hope and resilience are positive psychological feeling akin to optimism and essential for learning efficacy. Bandura (1998, p. 62) noted, "Success usually comes through renewed effort after failed attempts. It is resiliency of personal efficacy that counts". Luthans, Youssef & Aviolo (2007) found that positive constructs like hope, resilience, efficacy, and optimism have a common core that they called "psychological capital" associated with improved employee "performance". It seems that confidence and hope increase positive psychological capital (Youssef & Luthans, 2007). Even hopeful fundamental religious liturgies or sermons can manifest as optimism in other spheres (Sethi & Seligman, 2002). What this implies for EA-ISOLL is that a positive online demeanour and clarifying expectations around mistakes and resilience is pedagogically sound.

Use of emotion

For Bowlby (1969) "emotions are phases of an individual's intuitive appraisals" (p. 104) of a situation or encounter and an integral aspect of human experience. Emotions therefore have a cognitive dimension can fuel specific feelings or more generalised moods. Positive emotions, together with structured content nurture learning (Wubbels, Brekelmans, den Brok, & van Tartwijk, 2006; Walker, 2009) There is now compelling scientific evidence between positive emotions, brain electromagnetic activity and improved learning (Adolphs, Tranel, Damasio & Damasio, 1994; Immordino-Yang, 2018).

Use of humour

Humour could help support student motivation or strengthen relationships although is unlikely to be central to structure for lead deep and meaningful learning. Humour can diffuse stress and improve psychological wellbeing (Doosje, De Goede, Van Doornen, and Golstein, 2010). For teachers, used appropriately it can diffuse tension and help manage disruptive behaviour, reduce anxiety and increase attention and interest (Wu & Chan, 2013; Torok,

McMorris & Lin 2004). Although unlikely to be a central driving factor for EA, the role of using humour in online learning environment was considered a possible supporting EA factor.

Using names

Similarly, the draft framework also included other supporting or nurturing factors like using student names. These types of pedagogical tactics could help reinforce learner's social identity, improve motivation and engender a positive learning environment (Laslett & Smith, 2002; Gunawardena, Wilson, & Nolla, 2003; Garrison, Anderson, and Archer, 2000; Sung & Mayer, 2012). Naming students "conveys the teacher's interest and reflects a willingness to spend time and effort in learning names" (Laslett & Smoth, 2002, p. 11). Therefore, this factor is also included in the survey as a potential indicator of EA.

Continuing a thread

Continuing a thread means listening to students and flexing lessons to incorporate their commentary (Levin, Raghav, Shtiegman, & Samdadiya 2005). For these authors, it facilitates real-time conversations, widens and deepens discussions. In teaching, Anderson, Liam, Garrison & Archer (2001) elaborated on various pragmatic aspects of continuing a thread such as setting climate for learning, drawing in participants, prompting discussion, identifying areas of agreement/disagreement or seeking to reach consensus/understanding. Teachers need to encourage, acknowledge, or reinforce student contributions, and assess the efficacy of the process. Aspects included in the survey were expressing agreement; acknowledgement of others via agreement/disagreement; complimenting, asking questions or expressing appreciation. All these aspects of continuing a threat facilitate online synchronous discourse to build students' understanding and engagement in learning, and therefore will be considered as important factors of EA, and their influence on learning progression will be further examined.

Groups

Because cognition, behaviour and context all influence learning, the community or group is important (Bandura, 1977). Learning is a cognitive but also a social process (Bandara, 1977) and so benefits from carefully structured teamwork where there is positive interdependence but individual accountability (Smith, 1996). For Dillenbourg, Poirier and Carles (2003), a community differs from other forms of social organization. In a formal learning group, the instructor identifies goals and structures the lesson, whist in informal groups goals are not imposed. In short, the instructor sets L2 learning community objectives modus operandi is flexible (Kaye, 1992; Grossman, Wineburg, and Woolworth, 2001; Henri & Ludgren-Cayrol, 2001). L2 groups have a micro-culture, shared by its members and that relates to values, practices, conversational rules or even behaviour. (Preece & Maloney Krichmar, 2003). A community organizes itself around a common space of interactions, based on the logic of equality, collaboration and sharing (Henri & Lundgren–Cayrol, 2001; Preece & Maloney-Krichmar, 2003). Greetings cement group cohesion and strengthen bonds. Salutations reduce peer uncertainty and makes the group more salient to others. Lawler, Thye, & Yoon (2000) explained how negotiated exchanges strengthen group relational cohesion. For Anderson, Garrison & Archer (2001), group cohesion is assured by affective, interactive and cohesive behaviours. For EA-ISOLL, group dynamics may or may not be relevant but might be a consideration where L2 instructors organise Zoom classes with multiple language students.

Table 2.1 presents a summary of the draft factors for EA. Supplementary citations support the inclusion of these factors in the draft EA-ISOLL framework which will form the basis of the first data collection tool, an online survey.

Social Presence

Social Presence (SP) is the personal and purposeful relationship, which fosters effective communication (Garrison, 2007). By projecting their personal characteristics into CoI, participants view one another as "real" people (Garrison & Archer, 2007). Garrison, Anderson, and Archer (2001) suggested that instructors establish SP through emotional expression, open communication and group cohesion whereby participants create a supportive environment to foster critical thinking and inquiry. When visual cues are not possible, tone of voice can communicate emotional expression. SP is necessary but insufficient alone for the emergence of critical online discourse (Garrison & Clevland-Innes, 2005). In addition, Hwang and Arbaugh's (2006) research demonstrated a strong relationship between SP and learning.

Short, Williams, and Christie (1976) originally developed the theory of Social Presence (SP) which they considered was the sense that another person is "real" and "there". For them, SP involved salience, that is, "quality of state of being there" (p.65) between two communicators using a communication medium. They suggested that communication media can vary in their degree of SP and that these differences affect interaction and communication. For Short et al (1976) media with a high degree of SP are warm and personal compared to other, less visual or personal, mediums. Normally, video has higher degree of SP compared to audio or texts but SP can be enhanced with the judicious use of emoticons (Dunlapa, Boseb, Lowenthal York, Atkinsonb & Murtaghb, 2016) but, nowadays, web-based bots can interact proactively with students to build SP to tailor leaning and support to student needs and progression (Graesser, Baer, Feng, Walker, Clewley, Hays & Greenberg, 2016).

In terms of EA constituents, SP is moderated by self-disclosure which refers to revealing personal information about the self to others. Disclosure occurs in cyberspace via social medial platforms (e.g. Instagram and Facebook), instant messaging (WhatsApp, Snapchat)

and via blogs or email. It involves reciprocal tit-for-tat type exchange of personal facts, thoughts, and emotions in depth and breadth to develop and maintain relationships (Altman & Taylor 1973). Due to a sense of anonymity (Baker, 2005) and reduced fear of social rejection (Pennebaker, 1989) disclosure has accelerated in cyberspace. Research highlights the plethora of platforms for online revelation but there are unresolved risks of involuntary disclosure, privacy and security (Attrill & Jalil, 2011; Attrill, 2012).

To conclude, the literature on SP suggested that it is an important aspect for learning and involves instructors engaging with students with different techniques, designed to break down social distance such as using their names, revealing aspects of their life (self-disclosure), telling or sharing jokes or sharing emotions. SP establishes EP and builds cohesive personal relationships with intellectual focus. More than in face-to-face classroom environments, e-LL impels early social interaction to structure and support a milieu for focused L2 inquiry and reflective and threaded discussions. In short, although SP is necessary for ISOLL, it is one of many other potential constituents of EA.

Teaching Presence

Teaching Presence (TP) is the design, facilitation, and direction of cognitive and social processes to realize meaningful and educationally worthwhile learning outcomes (Garrison and Arbaugh, 2007). TP facilitates appropriate L2 online course design, content, assignments and schedules. In online teaching, TP is enhanced by learning platforms and apps as well as the proper monitoring and management of online interactions. Crucially, instructors who are present for their students are sensitive and attentive to their needs and the sociocultural spheres that influence and condition SLA (Fir Group, 2016). For e-LL, an initial, upfront visible teacher LMS or synchronous telephony presence could help ease student adjustment to an online environment and facilitate autonomy feedback (Mercer & Dörnyei, 2020).

According to Majeski, Stover & Valais (2018), TP is enriched by EP to build student Emotional Intelligence (EI) to help resolve complex L2 learning. An online teacher who is present, provides appropriate information and guides student discussions so they facilitate rather than distract from engagement and learning (Cleveland-Innes & Wilton, 2018; Garrison et al., 2010; Majeski, Stover, & Valais 2018). Timely and suitable feedback, including to corpus demonstrates TP (Crosthwaiteb, Storch & Schweinberger, 2020).

Cognitive Presence

CP involves participants in a CoI constructing and confirmation of meaning through sustained communication, discourse and reflection (Garrison, Anderson, & Archer, 2000, 2001). It is rooted in Dewey's (1933) four-phase Practical Inquiry Model where triggering events flags issues for further inquiry and generates questions that are explored by interactions in a social group. In these learning approaches, students reflect critically, explore issues and integrate them into previous knowledge to construct meaning. The integration phase typically requires enhanced Teaching Presence (TP) to guide learners towards integration and resolution (Garrison & Arbaugh, 2007). CP and critical thinking increase with varied delivery formats in diverse groups (Duphorne & Gunawardena, 2005). In Dewey's pragmatic CoI perspective, dualism is rejected in favour of a communal self with a rejection of the individual / community dichotomy. CP manifests externally, although dualists presumably expect agents in the community to experience internal cognitive transformation or critical thinking. With technological scanning advances it is possible to observe areas of the brain lighting up when activate, implying that there is an internal aspect to CP (Damasio, 2003).

Emotional Presence

Emotional Presence is outward emotional signals in CoI that interacts with SP to foster "learning climate" and with teaching presence for emotional feedback. (Cleveland-Innes & Campbell, 2012). Emotions form part of social presence and are connected to teaching and cognitive presence. According to Lipman (2003) emotional presence improves reasoning and judgement. While Garrison (2007) suggests that "the face-to-face environment can more easily provide socio-emotional support" (p. 64), such support is critical online in relation to teaching and cognition. As emotional presence highlights the broader online experience, it is considered a putative constituent of EA.

Flow

For Csikszentimihalyi, (1991) flow is, "when a person's body and mind is stretched to its limits in a voluntary effort to accomplish something difficult and worthwhile" (p.3). It is a state of heightened concentration and engagement by scaffolded learning activities that stretch students (Csikszentimihalyi, 1991; Van Velzen et al., 2019).

According to Csikszentimihalyi (1991), flow heightens state of being so that participants concentrate and become completely absorbed in tasks. For Huitt (2007), flow turns work into play so that people undertake it even at great cost, just for the sheer sake of it. So, flow could influence EA and language learning. It deepens learning and encourages long-term interest in the subject. In flow, students are intrinsically motivated and completely immersed or engaged at the behavioural, cognitive and emotional levels. Catalysts for flow include trust of the instructor and engaging/enchanting activities, pitched to stretch but not frustrate students. Frequent engagement, continued conversation threads or student satisfaction can all enhance individual online lesson flow and student overall satisfaction, trust and commitment (Garbarino & Johnson, 1999).

Table 4.2: Evaluation of EA-ISOLL factors and constituents

Emotional Attachment aspect	Draft notes on constituent aspects	Authors
Emotional attachment	Emotions critical for learning; Possible mechanism via influence of emotions on the dynamics of interpersonal relationship; belonging to a group or place; desire to make strong emotional attachments to others; interpretation of perception, alienative; calculative; or, moral emotional involvement to power modes; motivating tools, the need for "belonging" which could be used psychologically to focus student cognitive energies on learning tasks; sense of community, and empathic concern about other team members improves effective collaboration; attachment to brands (marketing)	Ainsworth, Blehar, Waters & Wall, 1978; Artino, 2012; Baumeister & Leary, 1995; Bowlby, 1973; Blum, 2005; Cleveland-Innes & Campbell, 2012; De Marrais & Tisdale 2002; Etzioni,1961; Garrison's 2012; Huitt, 2009; Hunt 1979; Kelman 1958; McCarthy,Wright, 2006; Rienties & Rivers, 2014; Shouten & McAlexander, 1995; Thorson & Rodgers, 2006; Tseng & Kuo, 2010; Whan Park, 2005; Wodak & Meyer, 2009.
Affection	Metalinguistic awareness and affection may increase the potential advantage of learning a second/third language; the strength of consumers' emotional attachments and loyalty to brands	Aron & Westbay, 1996; Feeney & Noller, 1996; Thomson, MacInnis & Whan Park, 2005; Thomas, 1988.
Friendliness	Friendliness can strengthen brand loyalty	Thomson, MacInnis, & WhanPark, 2005; Fournier,1998.
Connection	Dimension of "brand attachment" – self-connection; one of the EA factors; one of the critical factors for brand loyalty	Aron & Westbay, 1996; Feeney & Noller, 1996; Fedorikhin, Park & Thomson, 2008; Thomson, MacInnis & Whan Park, 2005.
Attached	Emotional bond between a person and a specific object; attachment involves proximity or accessibility and attentiveness but needs to be operationalised	Bowlby, 1969; Feeney & Noller, 1996; Whan Park, 2005.

Passion	Decision/commitment component of interpersonal love relationship; emotion and *passion* are strong components of brand love; closely linked to loyalty	Aron & Westbay, 1996; Feeney & Noller, 1996; Thomson, MacInnis & Whan Park, 2005; Sternberg,1986; Carroll and Ahuvia, 2006; Whang, Allen, Sahoury and Zhang's 2004; Shimp and Madden, 1988; Keh et al, 2007.
Delighted	One of the critical components of EA; indicator of critical discourse analysis; important in the social context, symbolic representation and power relation involved with language	Thomson, MacInnis & Wham Park, 2005; Wodak, & Meyer, 2009.
Trust	Crucial factor in establishing confidence in the accessibility and responsiveness; commitment to stability in learning; critical for rapport-building, especially in online tuition	Bowlby ,1973; Drigotas & Rusbult,1992; Rusbult, Drigotas & Arriaga, 1997; Wright, Jones, & D'Alba, 2013.
Love	Self–brand integration, passion-driven behaviours, positive emotional connection, long-term relationship, positive overall attitude valence, attitude certainty and confidence; brand loyalty, word of mouth, and resistance to negative information; attachment style is strongly related to self-esteem and to the various forms of love	Batra, Ahuvia & Bagozzi, 2012; Johnson, Herrmann, and Huber, 2006; Aron & Westbay, 1996; Feeney & Noller, 1996; Sternberg,1986; Shimp and Madden, 1988; Keh et al, 2007.
Relationship	Helps build connection; Customer Relationship Management (CRM) software- key component, integration within a customer centric strategy	Aron & Westbay, 1996; Feeney & Noller, 1996; Thomson, MacInnis & Whan Park, 2005; Thomas, 1988; Van Lange, Rusbult, Drigotas & Arriaga, 1997; Peppard, 2000; Bishop,2003; Hattie, 2008; Cook, et al 2018.
Fear	Coping with fear through affiliation with others, in the absence of other individuals. Those who experience fear in the presence of a brand feel greater emotional brand attachment than consumers who experience other emotions such as happiness, sadness, etc. Emotional response to the presence or anticipation of a danger can lead to withdrawal or conflict and reduce potential for learning	Dunn & Hoegg, 2014; LaTour & Rotfeld,1997; Passyn & Sujan, 2006; Boster & Mongeau,1984; Hughes, Ventura & Dando, 2007.

Hope	Hope is a prerequisite for establishing satisfying adulthoods; important managerial and academic implications of this feeling. strength of which evokes a readiness to allocate one's processing resources toward a brand	Shorey, Snyder, Yang, & Lewin,2003; Malär, Krohmer, Hoyer, & Nyffenegger, 2011; Park, MacInnis, Priester, 2006.
Use of emotion	Critical factor in the learning and teaching process because they impact on learners' motivation, self-regulation and academic achievement; Significant mediating effects on self-regulated learning; fewer negative emotions are necessary for self-regulation; fundamental element in an online community of inquiry.	Cleveland-Innes, & Campbell, 2012; Rienties, Rivers, 2014; Fredricks, Blumenfeld, & Paris, 2004; Meyer, 2014; Petty & Farinde, 2013; Pittaway, 2012; Pittaway & Moss, 2014; Reeve & Tseng, 2011; Vogt, 2016; Weimer, 2016; You & Kang, 2014.
Use of humour	Promotes understanding, holding the attention of students, managing disruptive behaviour, creating a positive attitude to the subject matter, and reducing anxiety"; increasing attention and interest; helping to illustrate and reinforce; appropriately used has the potential to humanize, illustrate, defuse, encourage, and keep people thinking positively related to appeal, delivery, and teaching effectiveness	Powell & Andresen,1985; Torok, McMorris, & Lin, 2004; Bryant, Comisky, Crane & Zillmann,1980; Garner, 2006.
Self-disclosure	High trust compensates for low privacy, and vice versa; critical implications for learning understanding; crucial for develop and maintain relationship; in support forums usually much higher than in discussion forums; female respondents tend to be more reciprocal than male respondents; to foster relationships – reciprocation is the primary benefit of self-disclosure; sharing personal experiences	Joinson, Reips, Buchanan & Schofield, 2010; Attrill, 2012; Barak & Gluck-Ofri, 2007; Posey, Lowry, Roberts, & Ellis, 2010; Sung & Mayer, 2012.
Continuing a thread	Use of threaded, online discussions that allow asynchronous communication has been criticised for not producing the perceived benefits for learners and educators; synchronous communication strengthens responsiveness of the participants; promotes higher-level reasoning.	de Bruyn,2004; Levin, Raghav, Shtiegman, & Samdadiya, 2005; Heckman, Annabi, 2005; Aviv, 2000.

Complimenting others	"Discourse process" leading to a variety of outcomes - product quality, other indicators of performance, others' opinions, satisfaction; part of Social Presence, "provision of affective feedback"; helping people belong, being patient- part of learning strategy	Heckman, Annabi, 2005; Hughes, Ventura & Dando, 2007; Burge, 2008.
Expressing agreement	Social respect (e.g. timely responses); open mind; "behavioural function of interaction serves to reinforce and shape the acquisition of new skills"; element of "Social Presence" in a community of inquiry	Sung & Mayer, 2012; Hannifin, 1989; Garrison, Anderson & Archer, 2000.
Using names	Creating positive learning environment; social identity	Burge, 2008; So, 2009; Sung & Mayer, 2012; Gunawardena, Wilson & Nolla, 2003; Garrison, Anderson, & Archer ,2000.
Acknowledgement of others via agreement/disagreement	SP in CoI (competence, independence, and support).	Sung & Mayer, 2012; Gunawardena, Wilson, & Nolla,2003; Hannifin 1989; Garrison, Anderson & Archer, 2000; Garrison & Baynton, 1987.
Acknowledgement of others via asking questions	Self-improvement (relative ability, creating higher flow of communication)	Sung & Mayer, 2012; Gunawardena, Wilson, & Nolla, 2003; Ryan, Gheen, & Midgley, 1998; Clark & Schaefer,1989.
Acknowledgement of others via compliments	Facilitating and modelling respectful critical discourse	Sung & Mayer, 2012; Clark & Schaefer, 1989; Garrison, 2007.

Expressing appreciation	Element of "Social Presence" in a community of inquiry; in online environment more group-centred interaction pattern; tendency to build on the comments of others	Sung & Mayer, 2012; Garrison, Anderson & Archer, 2000; Clark & Schaefer, 1989; Garrison, 2007.
Group cohesion via greetings/salutations	Positive emotions strengthen the person-to-group bond; uncertainty reduction makes the group more salient to others; facilitating and modelling respectful critical discourse	Lawler, Thye & Yoon, 2000; Järvelä, Volet, & Järvenoja, 2010; Garrison,2006; Garrison, 2007
Group cohesion via vocatives	Supporting collaboration and creating a sense of community	Garrison,2006; Garrison, 2007; Stacey, 2007
Group	One of the motivational factors in collaborative learning; indicator of Social Presence	Järvelä, Volet & Järvenoja, 2010; Garrison, 2007

2.8 Chapter summary

This second chapter presented a structured review of the learning and EA literature in two parts. The chapter considered learning theoretical frameworks, emotional attachment and EA factors and constituents, looking at explanatory pointers to underpin subsequent quantitative and qualitative investigations. Useful guidance came from Socio-Cultural Theory (SCT), experiential learning theory (ELT), reflective learning and the Community of Learning (CoI) perspectives which situated second language learning in its social and dynamic, interactive milieu and provided the theoretical scaffolding for EA.

To achieve the second study milestone (RO2) and clarify the meaning of emotional attachment for ISOLL, Chapter 2 then reviewed the child development psychological, marketing and learning literatures. It found that emotions have physiological and cognitive performance impacts on

reasoning, decision-making, language, reading, and mathematics. EA is a psychological state, fostered by sustained and culturally meaningful interactions with certain persons, entities, projects, rituals, transactions or activities. The literature suggested that EA for L2/LX learning sparks engagement and builds psychological capital to sustain investment and learning efficacy and autonomy. It seems that EA interacts with other constituents or subsidiary components within a learning system. The EA-ISOLL system provides a draft explanatory framework for subsequent operational investigations. However, it is important to note that the formulation of my RQ assumes a scientific paradigm and that students stated perceptions of their own 'learning success' is meaningful in different cultures. This reflective caveat alerted me to the potential pitfalls of naively adopting simplistic positivist assumptions. The next (third) chapter of the thesis explains the stud's research position, design, phases, participants and ethics.

Chapter 3 Methodology

3.1 Overview

Chapter 2, the literature review, clarified the concept of Emotional Attachment (EA), reviewed the literature on learning and generated a draft explanatory framework relevant to ISOLL in both outline and operational modes. The two sections of the literature review in the previous chapter shed some light on the complexity of the language and general learning backdrop but also identified several potential EA constituents that were incorporated into an exploratory theoretical framework for empirical investigation.

Chapter 3 articulates the overall study methodology - research paradigm, research design, phases, participants, ethics and triangulation. The systematic research design adopts a pragmatic research philosophy and uses mixed methods so involves both explanatory and exploratory techniques and multiple strands of evidence. The research adopted a sequential explanatory mixed methodology, harnessing inductive aspects so that overlooked explanatory factors and nuances could emerge. Figure 3.1 illustrates the various chapters of the thesis.

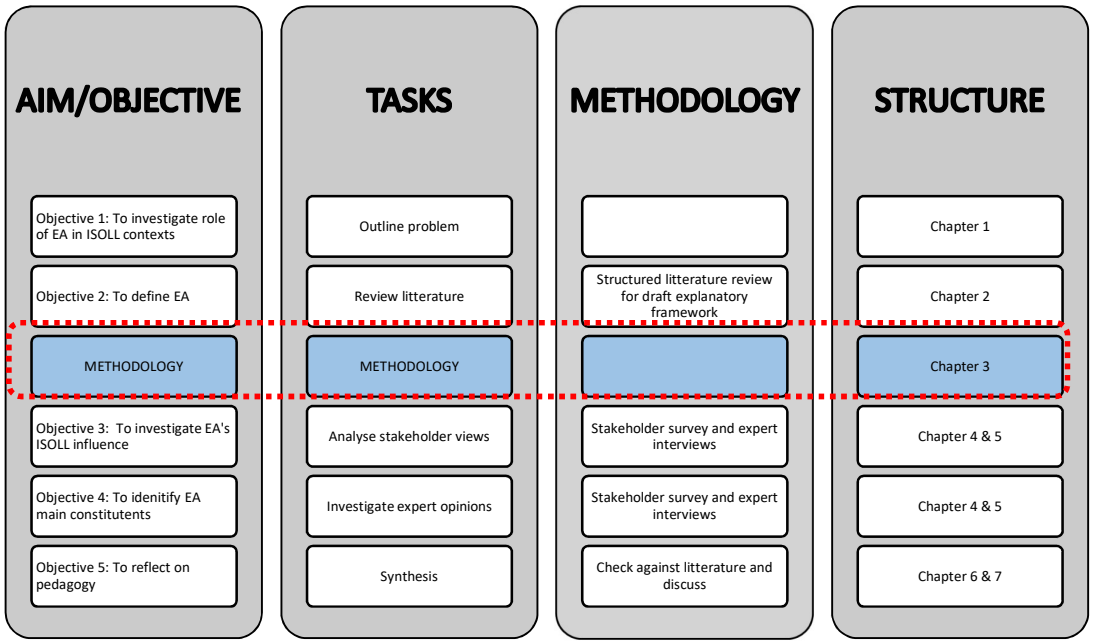


Figure 3.1: Chapter 3 within overall study structure

3.2 Research position and paradigms

Following Bettez's (2015), I think it is important for me to set out my positionality with respect to this EA research. I am a language teacher who graduated in English and Psychology and this fired my interest in the link between emotions and teaching. In my teaching practice across schools, colleges and universities in Russia, the Middle East Australia, the England I have encountered a multitude of conflicting L2 teaching perspectives, methodologies, practices, incongruent interpretations, intercultural misunderstandings and ethical dilemmas. I have become frustrated with the decline of SLA in the UK and the failure of educational systems to engage L2 students. Having travelled and worked extensively abroad in very different socio-political contexts and speaking Russian, German, some Arabic and now some French, it was obvious to me that culture and socialisation played a crucial role in SLA. At the same time, I became convinced that

emotions were the key to unlock student L2 potential. My positionality is quite conventional and without any deep political or feminist convictions. Above all, I am a pragmatist and wanted to improve the experience of my online L2 students. It is important to recognise that my conventional and pragmatic positionality has likely shaped the framing of my EA research and possibly my online interactions with experts where I may have downplayed multiplicities of difference among participants or misunderstood incongruent interpretations.

To adopt an appropriate design for the EA research, I reviewed alternative research philosophies and theoretical approaches or research paradigms. An understanding of research philosophy helped me design appropriate research and data collection methods (Creswell 2009). Three philosophical assumptions underpinned my research: ontology (existence), epistemology (knowledge) and axiology or principles (Guba & Lincoln, 1994). Ontology relates to whether the focus should be on the reality of the online setting such as IT systems or contact hours or whether the emphasis should be more on the feelings of respondents. Epistemology relates to how we can know about the world and involve separating extracted facts from the different sources. My research started with a more positivistic ontology and epistemology but gradually, as I came to understand learning situational complexities, diverse student identities and cultural idiosyncrasies, I incorporated structuralist and constructivist viewpoints in my pragmatic paradigm.

A key methodological epistemological distinction is between the nomothetic (quantitative) and idiosyncratic (qualitative) approaches to knowledge where the former involves generalising quantitative data but the latter, as its name suggests, is focussed on one case. My research design aligns with Edwards (2019) who argued that both quantitative and qualitative approaches can enrich knowledge. The research also had to consider axiology in its articulation of what constitutes learning progression and effective teaching practice. Creswell (2008) reduced these complications into three essential research perspectives:

- Positivist, scientific or post-positivist;
- Interpretive phenomenological or constructivist; and
- Critical realism or pragmatic mixed methods.

3.2.1 Positivist, scientific or post-positivist

A positivist or scientific research paradigm predominates in science and assumes that there are independent facts about a single reality (Guba & Lincoln, 1994). It checks that the facts fit theory and generally involves experiments or large samples with quantitative methodology. Statistical tests are usually performed on alternative hypotheses derived from theories about the real world. The world "out there" is considered independent of human existence or experience (Creswell, 2008). For Willis (2007), post-positivism or the modified scientific method, whilst it follows the same scientific principles, also allows some interaction between the researcher and the participants. It can use qualitative methods and participant-observation (Creswell, 2008). Common among social scientists, the goal is objective and generalisable knowledge about social patterns, seeking to affirm the presence of universal laws in relationships amongst pre-defined variables. This research adopted some aspects of a post-positivist approach. However, as students differ from each other in many ways, rather than randomly assigning them to either emotionally charged or depleted online teaching groups, to test EA impact (Depoy & Gitlin, 1998) data triangulation was used with interviews to enrich the findings of the initial survey.

For many researchers, the positivist or scientific model, despite its significant benefits, remains inadequate to capture the nuances involved in social or cultural phenomena. A positivist approach would have assumed that learning reality exists out there, independent of observers. Careful measurement or thousands of statistically robust observations on, for example, contact hours or test scores could reliably capture part of the teaching reality but

could miss the essential meaning of the learning experience. This research did adopt aspects of the scientific paradigm because it used some quantitative methods to provide precise and testable expressions of respondents' qualitative ideas. In Chapter 4, the survey analysis, quantitative data in numerical form such as statistics and percentages were used. Strictly speaking, respondents' stated views are not an observable phenomenon, but their analysis was systematic. The investigation was empirical and used statistical, mathematical and computational techniques. The draft framework however was not a mathematical model and no measurements of empirical observations were taken. Nevertheless, the survey did use an ordinal scale to rank the degree of agreement/disagreement.

3.2.2 Research validity

This humanistic paradigm has strong anthropological overtones and aims to understand learning culture from the inside by looking at the experience of different learners. The epistemology of the phenomenological paradigm involves the construction of inter-subjective knowledge. Interpretive knowledge is produced through a repeated interaction by researchers embedded within a culture. An ethnographer would build an authentic relationship with her students to observe and informally interview them without distorting events. For Guba and Lincoln (1994), a researcher generated trust over time by dealing fairly and empowering participants. Trust enables them to build a rich understanding of subjects in their milieu. Guba and Lincoln (1994) developed standards of trustworthiness and authenticity distinct, but parallel to, positivist notions like validity, reliability and objectivity. Their trustworthiness criteria include:

- Credibility (prolonged field immersion, checks with informants on interpretations, learning process);

- Dependability (ongoing inquiry);
- Transferability (rich context description to make valid comparison); and
- Confirmability (sources trackable).

For pragmatic security reasons, the research did not adopt an embedded ethnographic approach to gauge student online educational experience. Instead, its indirect expert interview alternative tapped the knowledge derived from extended student exposure.

For me, the research also had aspects of an interpretive or constructivist paradigm, particularly with the qualitative focus on understanding the underlying reasons, opinions and motivations in online synchronous informal environments. Qualitative methods enabled me to dig deeper into the learning processes to understand its social meaning and the limits. Qualitative interpretation involved reviewing transcripts of surveys and interviews with various educators and learners in the informal online learning space to investigate the specific issues they confronted. The research also sought to understand what different actions or phenomena mean for different cultures or individuals. For the inductive aspects the (see Figure 3.2), I collected participant views which underlie EA meanings and patterns of relationships.

3.2.3 Critical realism and pragmatic mixed methods

For Guba and Lincoln (1994), realism was neither value-laden nor value-free, but value-aware so a participant's perception is not reality (as in constructivism and critical theory). Rather, participant perception is one aspect of reality which is triangulated with other perceptions. In the critical realist perspective, reality exists but interpretations can vary widely (Brannen, 2017). To ground and moderate critical realism, I adopted pragmatic approach, operationalised using explanatory sequential mixed methods. I thus used theory,

collected data but also interpreted meanings (Brannen, 2017; Cresswell, 2009; Tashakkori & Creswell, 2007; Yin, 1994). Deductively, I used the literature to identify EA factors that were operationalised as factors for the survey instrument, but the online survey included some qualitative open-ended, questions that allowed respondents to talk freely (Brannen, 2107; Cresswell, 2009; Epstein, 2013; Yin 1994). Subsequently, I interviewed experts and used my own experience as an L2/LX teacher to reflect upon my results research.

Figure 3.2 illustrates the EA-ISOLL pragmatic paradigm with its blend of constructivist or interpretive and post-positivist world views. In this pragmatic or critical realist perspective, reality exists but interpretations of it can vary widely, calling for a repertoire of methods (Brannen, 2017). The mixed methods sequential research methodology I adopted collected evidence from multiple sources to make a reasonably convincing determination role of EA in the informal online learning environment.

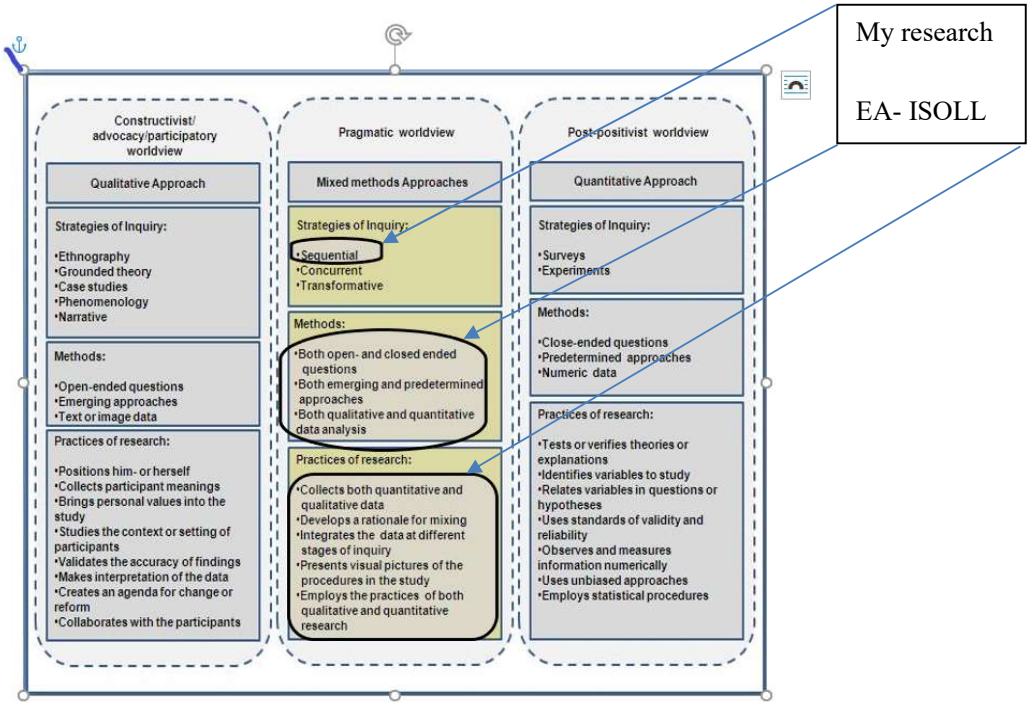


Figure 3.2 EA-ISOLL research situated in pragmatic quadrant of Creswell's (2009) methodology spectrum

3.3 Research design

Research design is the combination of the paradigm, approach and methods used to gather and analyse credible evidence from various sources to provide a complete answer to the research question or fully illuminate a phenomenon (Creswell 2009; Greene, Caracelli, & Graham, 1989). For my study, I used mixed methods because as Dörnyei (2007), argued quantitative approaches, although "systematic, rigorous, focused, and tightly controlled" (p. 34) and able to produce precise and replicable generalisable results, "average out responses across the whole observed group of participants" and so fail to capture the "subjective variety of an individual life" (Dörnyei, 2007, p.35). He goes on to argue that, quantitative methods are unable to explore the "reasons for particular patterns or the dynamics underlying a

situation or phenomenon" (Dörnyei 2007, p.35). However, qualitative research also has issues with small sample sizes, idiosyncratic focus and consequent bias risks. In line with Ushioda (2011) I collected data on, for example, hours of language study or computer experience but also asked respondents their perceptions about learning and factors, driving or hindering EA. However, my use of *ex-post* recollections and cross-sectional correlations only provided a snapshot of a complex and dynamic interactions of context and motivating or restraining forces that influence LX learner's willingness to engage or chat online at specific moment (MacIntyre, 2007). So, the research also used open questions or interviews to investigate students' fluid but socially constructed psychological "realities" The inductive constituents of the research (open survey questions and interviews) allowed for new issues to emerge which refined the initial draft framework. Respondents were asked many open-ended questions such as what they thought were important factors for learning or EA. The research employed both quantitative and qualitative data collection methods. The literature review and web-based research generated some secondary quantitative data. The semi-structured survey included a mix of closed ended (Likert scale) and open-ended questions. Although Likert responses are ordinal not interval data, practically they can be analysed using parametric or non-parametric techniques (Jamieson, 2004; Norman, 2010; de Winter & Dodou, 2010). In the open-ended questions, the respondents were provided an opportunity to elaborated on their views. Overall, the research collected a credible range of 'impartial' evidence to evaluate the alternate scenarios relating to the importance of emotions in informal online language learning. However, when conducting the surveys and interviews I should have perhaps taken more care to attenuate the potential impact of asymmetrical power relationships in contexts where either students or some of the interviewees were perhaps excessively deferential. It is possible that I did not navigate the complexity of my qualitative research dextrously enough in the complex multiplicity of the cotemporary postmodern SLA

context, especially with respect to possible incongruent interpretations between myself and some of my participants (Bettez, 2015).

To investigate EA-ISOLL, the research used an explanatory sequential mixed methodology (Creswell, 2009) within a pragmatic research paradigm that bridged post-positivist scientific and social constructivist divisions. To triangulate or add credibility to its findings multiple sources of evidence were integrated (Creswell, 2013), I blended quantitative with qualitative techniques. Overall, the adopted approach provided a pragmatic and balanced workable solution to uncover EA's learning significance that considered both objective and subjective knowledge (Morgan, 2007). The survey eventually generated 150 responses from instructors and global learners. It included closed and open-ended, exploratory questions. The focus for quantitative data investigations was on stated EA, its constituents and learning. Data analysis involved graphical analysis, descriptive, exploratory and interpretive statistics, including t-tests, Spearman's rank correlations and several regressions. Subsequent confirmatory interviews of linguists strengthened insights into the role of EA in language learning to help validate the refined EA framework. In the final chapter, I reflected on the operational findings in the light of the literature and my own personal teaching experience to provide nuanced pedagogical suggestions (RO5).

3.4.1 Explanatory sequential design

My EA and synchronous informal language learning research used sequential mixed methods with explanatory quantitative and exploratory qualitative stages. Figure 3.3 situates the ISOLL methodology amongst alternative strategies of enquiry. The method involved, first, designing a survey instrument based upon my framework. Once confident in my design, I identified suitable participants to survey or interview. Having collected the data

from respondent, I then analysed it descriptively, statistically and qualitatively (Creswell, 2009).

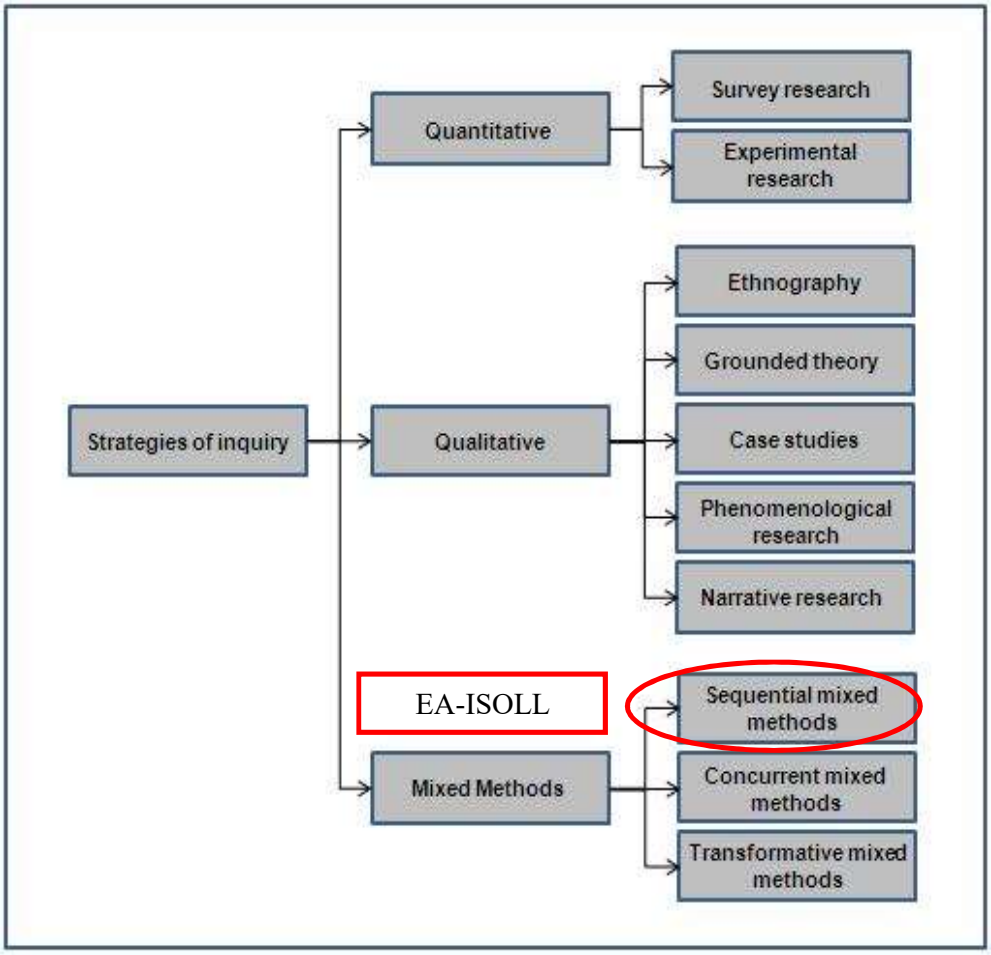


Figure 3.3: EA-ISOLL research project situated within other strategies of enquiry (Creswell, 2009)

The ISOLL explanatory framework guided the survey stage (Operational Phase -Stage I) The framework helped to clarify aggregation, categorisation, time specification and calibration (Brannen, 2017; Creswell, 2009; Yin, 1994).

The survey included covariates to control for demographic, or other contextual confounding influences on learning, aside from emotions. Later, the mixed EA research employed inductive research with open-ended survey questions and expert interviews. The

inductive or open-ended features of the research helped to ensure, first, that no aspects of EA were inadvertently overlooked as they emerged from the data. Second, the inductive constituents like the open-ended questions in the survey or expert interviews helped to tease out any subtle individual nuances, ignored or marginalised in quantitative analysis.

Since online synchronous learning involves human activity in a specific context, to enrich the scientific data gathered in some of the survey questions, many qualitative interpretive questions were included. To investigate the EA research problem and answer the main research questions, I adopted a pragmatic worldview and mixed methods (deductive and inductive) sequential study design. Figure 3.4 below provides a schematic overview of the investigation.

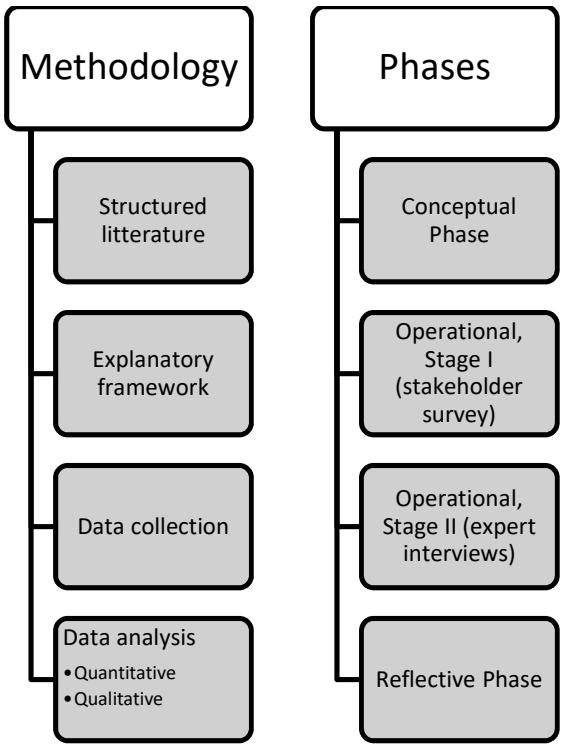


Figure 3.4: Schematic representation of this mixed sequential research

To investigate the influence of socio-cultural context or EA on learning and to clarify the constituents of EA, the statistical analysis in the second part of Chapter 4 formulated three main hypotheses, linked to the thesis research questions (see s1.3 & s1.4 above).

- RQ3.1: Does LC influence LS? LC is insignificant (H-LD_0) for LS vs. the alternative hypothesis that LC is significant for LS (H-LD_1)?
- RQ3.2: Does EA significantly influence learning success? EA is insignificant for learning success (H-EA_0) vs. the alternative that EA is significant (H-EA_1).
- RQ4: What are EA's main constituents? I postulate five sub-hypotheses to help resolve RQ4 (see Figure 3.5 RQ4 - Constituents).

However, in hindsight and noting Woodfield's (2010) discovery that participants thought in both L1 & L2, for any future L2 survey instrument I would combine my questionnaire with elicitations to provide insights into extraneous influences on cognitive processes underlying their sociocultural and sociolinguistic choices. Even though I enriched my study with some qualitative interviews, on reflection (see 5.1, 7.7 & 7.9) these could have been more astutely designed to ensure my L2 interpretations were more nuanced and insightful.

For the fourth study objective and question, further hypotheses were drafted concerning the EA's constituents: Affection, Connection, Passion, Social, Presence, Teaching Presence and Flow. Figure 3.5 below presents a hypothesis matrix that operationalised RQ4. Note, the qualitative expert interviews, analysed in Chapter Five, refined and enriched the earlier inductive insights from open-ended survey questions.

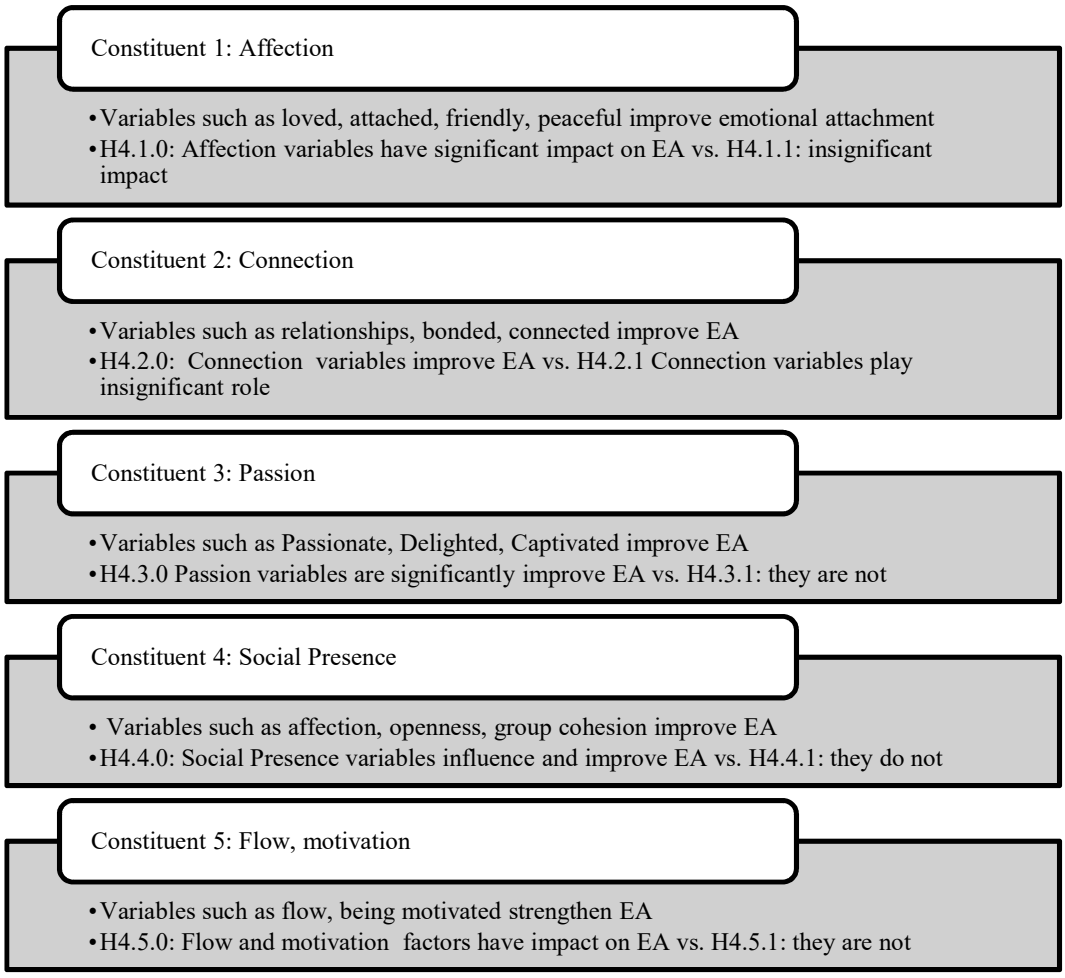


Figure 3.5: RQ4 Constituents hypothesis matrix with alternate constituent related hypotheses across five putative EA_ISOLL constituents.

Having articulated the possible EA constituents, the research identified operational indicators that underpinned the survey instrument questions. Figure 4.2 in Chapter Four illustrates the link between the draft explanatory framework (EA-ISOL_V1) and the survey instrument.

3.4.2 Data collection instruments

The survey and qualitative interviews helped to investigate RQ3.1 and RQ3.2 (Influence of context and EA respectively), RQ4 (Constituents) and RQ5 (Pedagogy). The interviews

with expert educators enriched informal online L2 learning survey insights. Mixed methods provide balanced evidence on learning context, key factors of Emotional Attachment such as Connection, Affection, Passion, Social Presence, and Flow. Tasks for a complete answer to identify the role of Emotional Attachment include consideration of:

- Collecting and analysing appropriate data to determine the level of impact of emotional attachment on learning process;
- Collecting and analysing appropriate data on possible learning factors in informal online learning environments;
- Characteristics of flow; and
- Recommendations relating to concrete improvements.

The research design involved three phases to minimize the chance of drawing incorrect causal implications from unreliable or irrelevant data.

3.4.3 Research setting

The research setting is informal online synchronous language learning environments. The participants included a variety of students and instructors with experience of online informal L2 learning, mainly delivered by one on one via video-telephonic platforms such as Skype, Google Classroom or Microsoft Teams. Nowadays, many students for L2 or their other studies are exposed to an evolving portfolio of online educational platforms, including but not limited to: ClassDojo, Deck Toys, EdModo, EdPuzzle, Edulastic, FlipGrid, Genially, Habyts, Hapara, Kahoot!, Kapwing, Parlay, Pronto, PACARD, Seesaw, Slack, Socrative, Socrates, Start.me, StudyBee, Sutori, Top Hat, Webex, WhatsApp, Wooclap and Zoom.

For the survey, there were two waves of data collection. Wave 1 from April- January 2017 and Wav 2 in 2018. The interviews were held in Russia during August 2017 and in the

UK in September 2017. Interviews were conducted online or, where possible, face to face in neutral locations. Interviews were recorded and transcripts made. One hour was scheduled for each interview but interviewees were not pressurised and could express their thoughts freely. I intervened as little as possible to ask questions or prompt experts with discussion topics or keep them focused. Subsequently, embedded EFL research used aspects of Grounded Theory (Glaser & Strauss, 2009; Strauss & Juliet 1994). The researcher also took memos during informal online synchronous Skype teaching sessions between October and December 2017. The memos on these language lessons were analysed in the light of the research findings and helped enrich exploration of EA and learning. The participation in these Skype lessons was voluntary and the timing was negotiated with students. Student-participants also engaged in Skype sessions via Internet connection at a convenient time from home. The Skype platform was selected as the most popular among the students. To enhance the online experience, participants were requested to use a headset with microphone to reduce the impact of any possible background noise. Participants were also encouraged to enter text via Chat facility in Skype to supplement their reactions to lesson content.

3.4.4 Draft explanatory framework

I summarised the literature (Table 2.1) and considered other explanatory frameworks, including Bloom (1956), Csikszentimihalyi (1991), Garrison, Anderson and Archer (2000), Krathwohl (2002), Renties and Rivers (2014), Thomson, MacInnis and Wham Park, (2005) to distil the factors influencing emotions and learning into its draft EA-ISOLL explanatory framework in Figure 3.6.

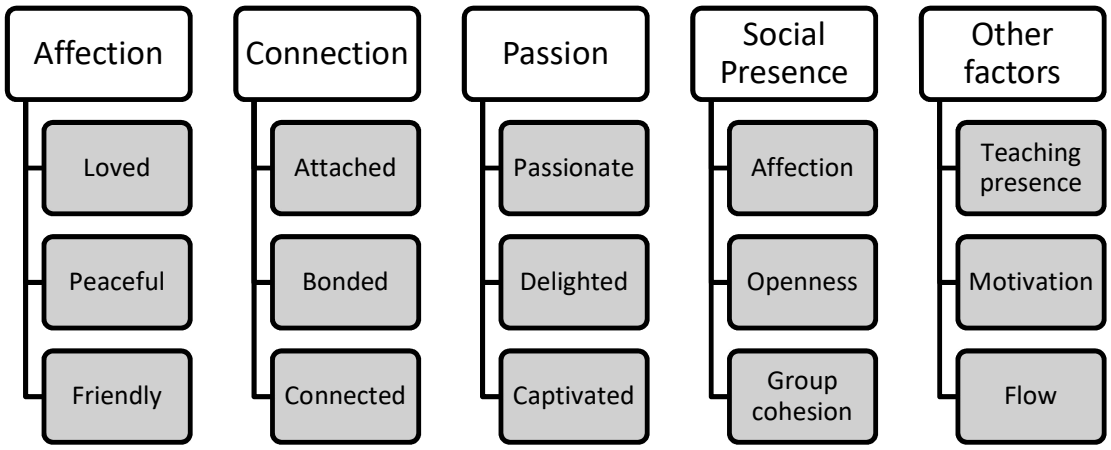


Figure 3.6 Draft explanatory EA-ISOLL_V1 framework, illustrating draft constituents and factors (Source: Author, 2015)

3.4 Research phases

I conducted my research on EA and informal synchronous online language learning in three phases that were, subdivided, into parts, stages, waves or steps. Within the Conceptual Phase, the literature review was split into Part A and Part B. The Operational Phase involved two stages – a mainly quantitative survey (Stage I) and then some expert interviews (Stage II). For the survey, respondent data was collected in two waves and the results were analysed in two steps - descriptively and then statistically. Figure 3.7 below illustrates the methodology structure.

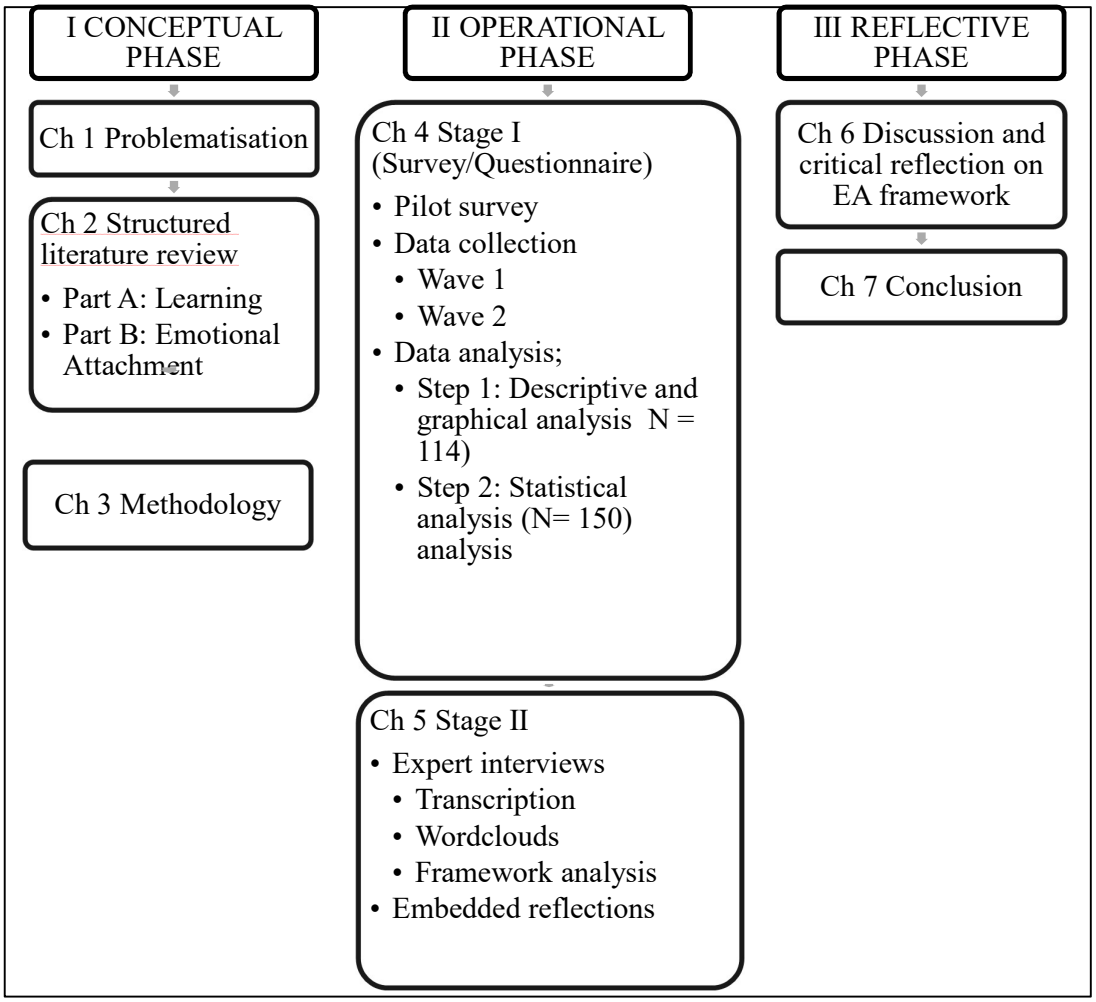


Figure 3.7 The sequential mixed methods research phases (Source: Author 2017)

Figure 3.7 illustrates and details the three phases for a systematic investigation of the role of the Emotional Attachment. To generate a draft EA framework, the research adopted components from existing models, which was initially pilot tested via preliminary face-to-face interviews and email surveys with language teachers and other instructors to see if it made sense. Five experienced language teachers and academics participated to a varying extent in refining the initial pilot survey. Subsequently, I sent the instrument via email to an initial sample of 114 students and instructors (Wave 1) to enable some exploratory graphical analysis. Subsequently, I was able to increase the total questionnaire sample size to 150 students (Wave 2). During its embedded phase, the researcher used memos from embedded

teaching incidents as an independent check on the major emotional issues linked to informal online teaching programmes. Finally, the results from the different data sources were integrated in the Reflective Phase as illustrated in Figure 3.7.

3.4.1 Conceptual Phase

For the Conceptual Phase of the study, I systematically reviewed relevant academic and professional literature on learning (Part A) and Emotional Attachment (Part B). I then devised an explanatory framework and detailed my research methodology.

I identified relevant operational indicators of practice such as, for example, the application of online web-based technologies for effective communication, linguistic practical problems resolution and overall success. Remote information learning sources need support by qualified teaching experts during interviews to assess the relevance of teaching materials, determine suitability and record key features or encumbrances for learners. For effective language course determination, grounded evidence supports the selection of appropriate online teaching methods. Practical indicators of effective online learning process could involve:

- Documenting the indicators of affection to the online course;
- Recording learners' passion towards online experience; and
- Observing satisfaction with the online course through flow indicators (frequency and duration of studies, ease of use and continuity).

The web-based research and literature review helped my general understanding of L2 informal online environments. It involved searches of online L2 informal learning communities, frequency of learning experiences, noting learning practices and analysis of social media about participants' learning experiences. The literature review was conducted in

two parts. First, a review of key learning theories and frameworks that was followed by a review of the emotional attachment literature. The Conceptual Phase developed a draft EA explanatory framework with EA factors that were sourced from credible literature, they were considered valid and reliable because they consistently measured their underlying constructs (Fielding & Gilbert, 2006).

3.4.2 Operational Phase – Stage I (Survey)

The Operational Phase involved a survey followed by expert interviews (qualitative). Before the main survey, a pilot survey was conducted that was then reviewed by several (5) experts. Their feedback was incorporated into the instrument's final design. The main survey collected data in two waves and then analysed it in two steps. Wave 1 data collection was mainly online and took place from February 2017 to September 2017. Wave 2 took place in April 2018 and involved the distribution of a hard copy survey instruments to Chinese university students with experience of studying English online. The analysis of respondent data reflected these two data collections waves.

Step 1 involved an initial descriptive and graphical analysis (N = 114). Step 2 involved adding another the second wave of 36 respondent's information and undertaking more robust statistical analysis on the complete sample (N = 150), using both parametric and non-parametric exploratory and inferential techniques to answer hypotheses related to the key research questions. As discussed earlier in Chapter 1, the survey investigated four main areas. These involved the learning context and impact of EA on learning (RO3), controlling for other covariates, EA's constituents (RO4) and pedagogical insights (RO5). Most questions involved five-point Likert scale ordinal responses to ascertain respondent views,

but the survey also included some semi-structured (open-ended questions) that were idiosyncratic and inductive rather than nomothetic and deductive.

3.4.3 Operational Phase – Stage II (Expert interviews)

The expert interviews enabled deep qualitative analysis to help understand EA-ISOLL complexity and generate causal insights (Hakim, 2012). Seven interviews were conducted with experts and language instructors to probe for nuances and learning insights related to EA and learning. The interview transcripts were analysed using an adapted Framework Method (FM) to generate codes (Braun & Clarke, 2006). The interviews performed three tasks. First, they helped to validate concepts (triangulation). Second, they provided some inductive assurance that the draft framework was comprehensive and generalizable. Finally, they provided rich descriptive and contextual insights to establish the depth and breadth of teaching and learning experiences. Expert interviews were a qualitative approach, but the emotional attachment research addressed the four concerns raised by Katz (1983): representativeness, influencing, reliability, and replication.

FM (Braun & Clarke, 2006) helps reduce arbitrariness or cherry-picking respondent views to ensure representativeness of responses. Rather FM, provides a structured and systematic approach to categorize and organize unwieldy qualitative information such as semi-structured interview transcripts. It provides a thematic analysis of qualitative content. To draw explanatory conclusions, it identifies data commonalities or differences and investigates relationships. Originally used for social policy research, the FM is now common in medical and health research (Ritchie & Lewis, 2003). As Figure 3.8 indicates, FM proceeds iteratively and first assigns codes to groups of sentences or text segments and then groups these codes into clusters of similar and interrelated ideas and concepts. A tree

diagram first structures categories and codes. As abstraction proceeds, categories derived from raw data are associated with themes (final output). An output matrix includes rows (cases) and columns (codes) with data "cells" to systematically structure and reduce data. The Framework Method works well with deductive, inductive, or combined qualitative analysis and involves critical reflection and judgement to determine meaning (Braun & Clarke, 2006).

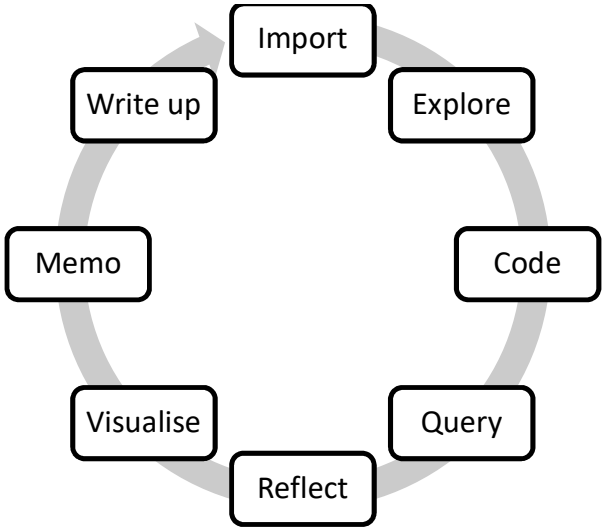


Figure 3.8: Iterative interpretation of confirmatory interviews (adapted from NVivo11 Pro guidance, 2017)

To avoid inadvertently influencing interviewees, I was very careful to only outline general themes for discussion and not to inadvertently prompt respondents in any direction. Rather than foisting a fixed view on interviewees of what was, for example, emotional attachment I sensitively negotiated interviewees' culturally influenced and subjective impressions to establish what specific issues relating to emotions and language learning meant for them.

The semi-structured interviews (Appendix B) enabled free flowing discussion and provided a good platform to use thematic analysis. The analysis of open-ended responses adopted aspects of FM (Braun & Clarke, 2006) and used the NVivo software to make an initial assessment of the survey or expert interviews. FM offers an accessible and theoretically flexible approach to analysing qualitative data (Braun & Clarke, 2006). A full transcript of each interview was recorded. The transcript was then filtered and analysed systematically, looking for further practitioner and expert insights into EA and learning. To categorise ideas and ascribe standard sentence meanings across different interviewees transcripts, I adapted the FM approach. As transcripts were of manageable length, word searches and repeated iterations between transcripts were helped identify the key ideas or codes encapsulated in transcripts. For Willig and Stainton-Rogers (2017), codes, "capture surface of the meanings of the data, but that does [imply] a superficial or purely descriptive reading" (p.23). Latent or interpretive codes go beyond participant expressed meanings, to the underlying patterns, stories in the data. They tend to bring the analyst's theoretical frameworks that help explain data, and thus require more interpretation and insight. Codes included things (behaviours, incidents or structures), values (which inform or underpin statements) or emotions. During analysis, indicative coding was CAPITALISED in squared brackets for subsequent framework analysis. The EA-ISOLL explanatory framework helped code items, although some new themes emerged inductively. However, the assignment of codes requires a critical interpretation of text to assess meaning beyond simply counting words. To facilitate interpretation, I edited original transcripts but, for assurance, the researchers independently reviewed extracts of the updated transcripts to assess initial coding validity. One concern was that sometimes a respondent mentioned the same category several times over a few sentences to convey meaning. The research considered these sentences as essentially conveying one idea and so only scored the notion as mentioned once. However,

an additional difficulty was to conclude from the transcript the emotions involved. It was difficult to identify uncomfortable, troubling or unexpected phrases or hesitations which did not "fit" with the rest of the account. To enable the systematic comparison across interviewees, I constructed a matrix to summarise data and identify categories. The draft framework provided the initial category codes. The research conducted transcript analyses in two stages. The transcript was sequentially reviewed line by to identify main codes. Next, the identified codes were used for key word searches.

I handled data iteratively rather than linearly (import, code, query, interpret and then write-up). The researcher made an initial meaning assessment when interviewees articulated a theme, topic, concept, idea or experiences. Often, this initial interpretation was revised as more data emerged. The draft EA framework helped to code the cleaned interview transcripts. To explore, the interviewees' transcripts, I initially assigned theme nodes and then coded the text. After reflection and discussion, the coding was refined. Several queries were run and gradually insight into EA and ISOLL emerged. NVivo software was used to explore these codes and generate word cloud diagrams.

3.4.4 Reflective Phase

In the final Reflective Phase of my thesis, I reflected on my own embedded L2 experience and discussed my research findings and in the lights of the literature. This reflection on adds another credibility check (triangulation) to strengthen the findings.

3.5 Participants and ethics

I used convenience sampling to identify survey respondents. The survey respondents were L2 students who were invited to participate in the research on a voluntarily basis. As per

Toepoel (2016), I emailed students and invited them to participate in an online survey (See Appendix A). For the subsequent expert interviews, I personally knew some of the L2 teachers, but others were identified from Research Gate, Facebook, VKontakte, Linkedin. To select experts, I my criteria involved the minimum of a master's degree and 10 years of language teaching with significant online experience (>2 years). I conducted most interviews online via Skype but interviewed a couple of available respondents face to face.

In two stages, I eventually surveyed 150 adult learner participants who were either currently engaged in online informal L2 or who had experience of it in the recent past (mostly EFL or ESL although some participants were students of German or Russian. For Stage I of the online survey, I initially received and analysed 114 full responses. Due to resource constraints and pragmatic considerations (see 3.2.3), I sampled conveniently rather than randomly, based on my access to students via my own personal or professional networks. In line with GDPR guidelines (see Glossary), all students were asked by their teachers whether they were willing to participate my study and, if so, to email me for further details. It was made abundantly clear to student cohorts that participation was entirely voluntary and totally separate from their other studies. In line with Salkind (2010), I selected respondents who were available and accessible but also endeavored to ensure the sample included a diverse range of participants from different professional fields, nationalities and ages. The obvious advantages of my use of non-probability, convenience sampling was that it imposes some caution when interpreting the relevance of sample statistics for population parameters.

To identify survey respondents, convenience sampling was adopted based on:

- Social media (Facebook, Linkedin, Vkontakte, ResearchGate linguistic experts with seemingly credible L2 teaching experience);

- My own personal contacts with teachers or university lecturers at local or overseas universities who taught students in a range of disciplines but who had some experience of parallel exposure to informal online language learning
- Students whom I personally taught online.

Ethics is one of the most important considerations in research to ensure that respondents know the purpose of the research, are not vulnerable, provide data voluntarily, are treated with respect and provided with feedback (if requested). In line with USQ ethical guidance I took great care to secure respondents' data (with passwords and prudent hardware oversight), protect their privacy (via anonymisation of results) and, at the end of this research (study and thesis evaluation) intend to securely delete redundant data.

As indicated in the invitation letter (Appendix A), respondents were informed about who will have access to their data, the timing and the objectives of the interview and their rights to anonymity. This measure increased the rate at which interviewees responded honestly to survey questions, as they were assured of confidentiality and anonymity (Singer, Von Thurn & Miller 1995). Respecting the privacy rights of the interviewees, the research gave participants the freedom to choose how much information about themselves they were willing to reveal (Toepoel, 2016).

The invitation letter (Appendix B) sent to potential interviewees implemented the principles described in Aguinis and Henle (2002) about informed consent. Participants were informed that, at any time, they could decline or withdraw from the research. The invitation letter clarified the purpose, importance and approach of the EA research as well as outlining to the participants the behavioural expectations. The respondent profile was diverse and included a variety of experienced language practitioners. Initially these came mainly from

Russia and the UK but subsequently 36 Chinese university students with some experience of informal synchronous online English teaching were included.

The interview experts represent were as diverse as pragmatically possible. The breakdown of diversity factors include gender (2 males and 5 females), age range (from 25 to 75), professional status (private teachers, company directors and academics), range of online experience and different geographical locations (regional and capital cities in Russia and the UK). During the interviews, participants could freely express their views around the notions of EA and flow. Experienced practitioners tended to make the most significant contributions on the role of emotions in catalysing and play in stabilising flow to improve second language learning in informal e-learning environments. Once the interviews were transcribed, emergent (inductive) themes were collated and categories identified. *NVivo* software helped to gain a nuanced, constructivist understanding of EA-ISOLL.

3.6 Triangulation

Triangulation involves using different sources of evidence to check results and increases confidence that the results are reliable and generalisable (Tashakkori & Teddlie, 1998; Tashakkori & Creswell, 2007; Tashakkori & Teddlie, 2008). My own experience as an online language instructor provided a final reflective source of evidence for the research. Figure 3.9 illustrates the iterative triangulation adopted to reinforce confidence in the research findings (Currie, 2005; Tellis, 1997).

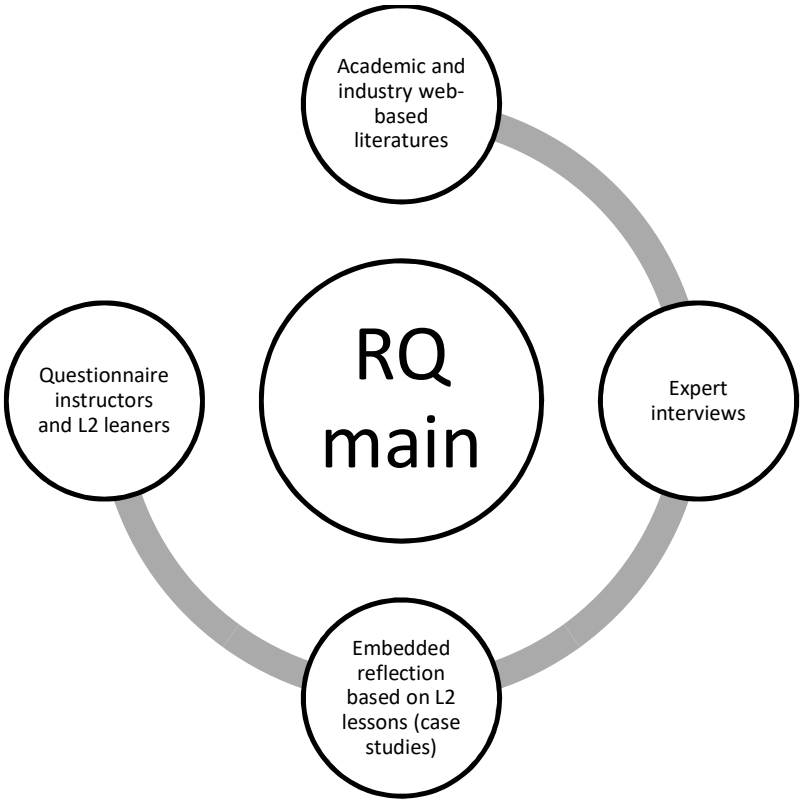


Figure 3.9 Principles of iterative triangulation adopted by the EA study. (adapted from Currie, 2005)

Overall, in accordance with the injunctions of Tellis (1997) and Yin (1994), my research used multiple sources of evidence (triangulation) to investigate the EA phenomenon:

- Structured literature review, including contemporary industry web-based evidence
- Online instructor and learner survey
- Expert practitioner interviews
- My own embedded L2 practitioner reflections.

3.8 Chapter summary

The third chapter of the EA-ISOLL thesis developed an appropriate research methodology. First it outlined alternate scientific or interpretive research paradigms and considered the merits of different deductive or inductive approaches, using either quantitative or qualitative data. It selected a pragmatic mixed research design where the EA literature was harnessed to generate a deductive explanatory framework, used to structure a survey instrument. The questions were crafted around the EA hypotheses (see Figure 3.5) and probed factors intimated by the draft outline and operational explanatory frameworks. However, the survey also included some open-ended questions aspects of synchronous informal online language learning. I used a convenience sample of international language learners and instructors. I initially emailed the instrument to 114 mainly European respondents but later surveyed another 36 Chinese university students with informal L2 language exposure. Once responses were returned, the survey data were cleaned and checked for outliers that could significantly distort results. The descriptive statistics of the cleaned data were extracted. For simplicity, respondents were not weighted to compensate for under-represented cases. As the cleaned data were reasonably normal and not skewed, they were explored and analyzed, using a range of statistical analysis techniques, including multiple regressions to assess the significance of EA for learning and of the various EA factors to help identify its main constituents.

To triangulate the survey results, I conducted two other supporting strands of research – confirmatory expert and practitioner interviews (in Chapter 5) and reflection on embedded Skype lessons. Transcripts of the expert interviews were inductively analyzed using Framework Analysis to group coded words into categories for interpretation and comparison with interview results. The mixed methods triangulation strengthened confidence in I

findings. Here, at the end of the Conceptual Phase (first three chapters), a summary of I (weigh point) is in order. The thesis has now answered the following critical questions:

- *What* phenomenon / problem needs investigation? (Ch1)
- *Where* and *when* is the focus? (Ch1)
- *Which* key authors discuss the topic? (Ch2)
- *What* are the alternative explanations*?* (Ch2)
- *How* should evidence for a determination be collected? (Ch3)
- *Why* is the selected research design appropriate? (Ch3)
- *Where* are the credible sources of evidence? (Ch3)

In short, at the end of the third chapter, on the way to answer its main objective (RO1), I reached its second milestone (RO2: Definition of EA) and articulated an appropriate research design. In Chapter Four, analysis of the survey results helps to answer RQ3 (Influence), and RQ4 (Constituents).

Descriptive, graphical and statistical and analysis of the online survey in Chapter Four refines this initial EA framework. After expert interviews (Chapter 5) and my own embedded practitioner reflections (Chapter 6), the final validated EA-ISOLL framework provides a complete answer to the main research question.

Chapter 4 Survey results

4.1 Overview

To investigate emotional attachment, its constituents, its relative importance for learning and the pedagogical implications for informal synchronous online language learning (EA-ISOLL), the research triangulated multiple sources of evidence. To help answer the main research question: *How does EA enhance second language learning in diverse informal synchronous online learning contexts?* I harnessed the literature for a theoretical framework and designed a suitable research approach. I analysed the first wave of survey descriptively and graphically (Step 1, n = 114) but for the complete sample of 150 respondents I undertook more robust statistical analysis (in Step 2).

Chapter Four presents the results of the study's graphical, non-parametric, parametric exploratory and interpretive statistical analysis. The two-step analysis investigated EA's relative learning impact, identified its constituents and guided subsequent pedagogical reflection. These analyses provide the first of two strands of empirical evidence to test and refine the EA-ISOLL framework. Chapter 4 also presents responses to some open-ended questions to illuminate or enrich interpretation. Subsequently, Chapter 5 presents results from the expert interviews.

Figure 4.1 presents an overview of this chapter.

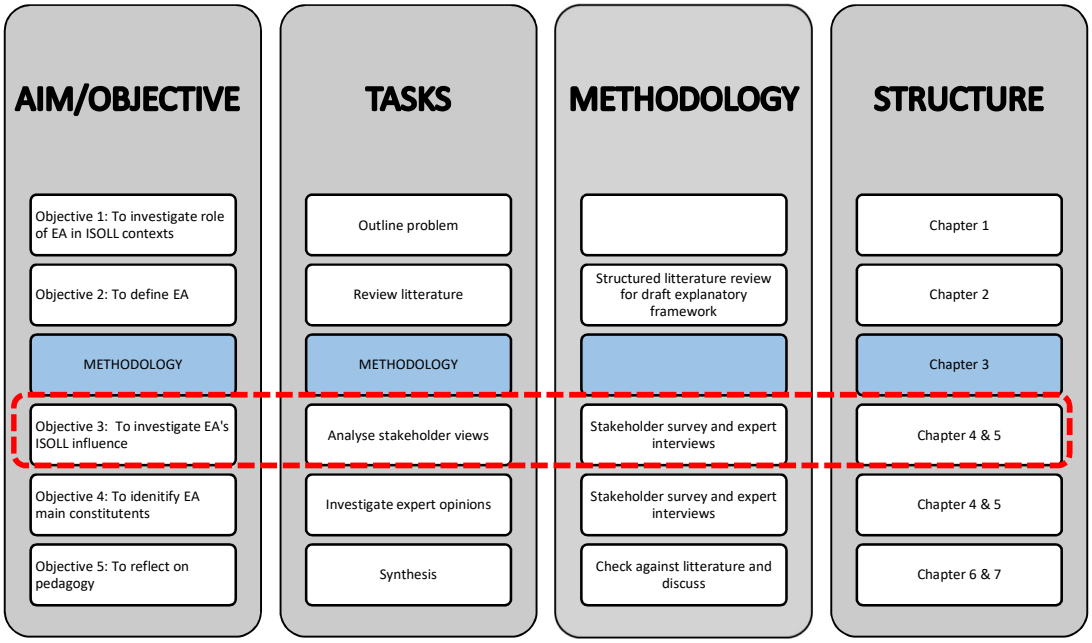


Figure 4.1 Chapter 4 within thesis structure

The draft of operational explanatory framework (see Figure 4.2) illustrates what questions of the survey are linked to certain EA constituents, which emerged from previously discussed literature review.

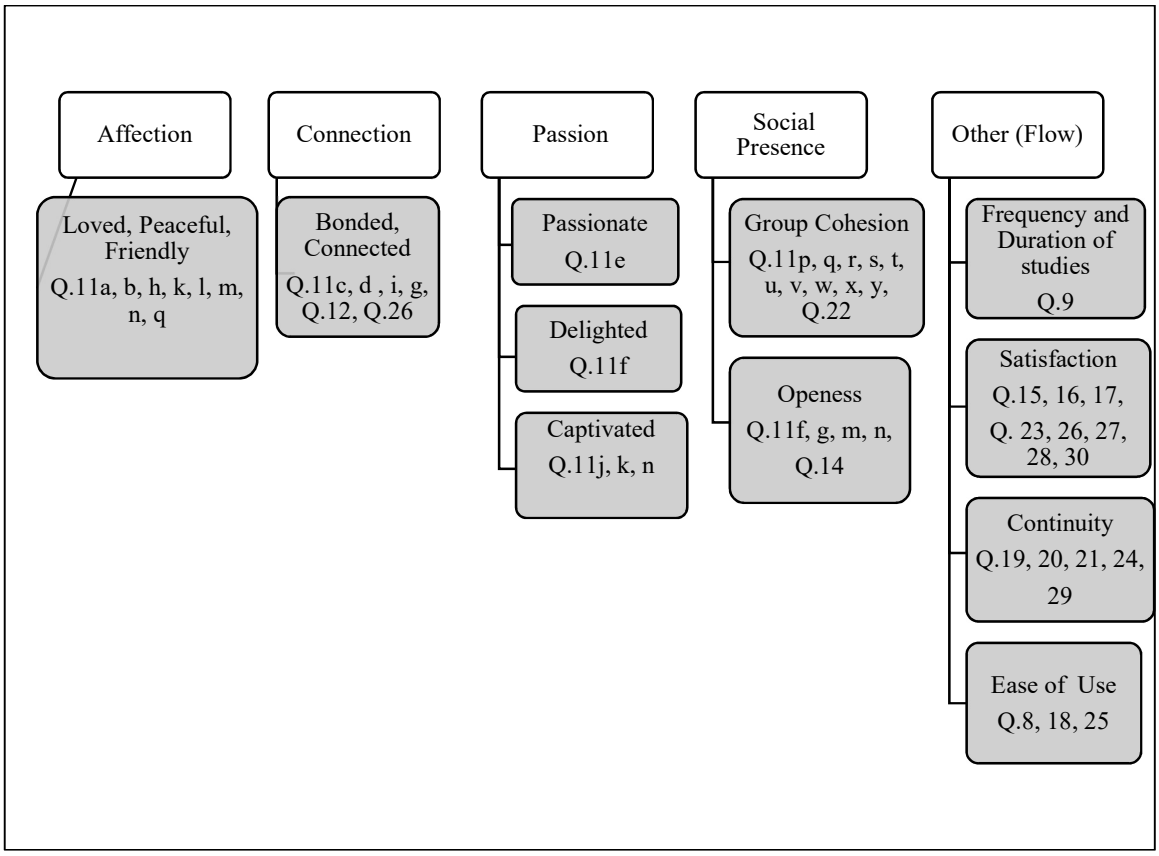


Figure 4.2: Operational draft explanatory framework. (Source: Author 2015- 2018)

- **Constituent 1 Affection:** Learners' experience has a range of factors of affection to the online course in the explanatory framework such as friendliness, love, hope, use of emotion, humor, self-disclosure, expressing agreement.
- **Constituent 2 Connection**: Learners have access to an online informal environment, where their synchronous learning experience is characterized by feeling connected or bonded.
- **Constituent 3 Passion:** Learners'/educators' passion towards online learning experience is measured by such variables as being passionate, delighted, captivated.
- **Constituent 4 Social Presence:** Variables of Social Presence include: group cohesion and openness.

- **Constituent 5 Flow:** One of the strongest motivational factors in learning experience covers such indicators as: frequency and duration of studies, satisfaction, continuity, ease of use.

As illustrated above, the EA-ISOLL_V1 draft explanatory framework initially included five constituents (Affection, Connection, Passion, Social Presence, and Flow), captured via several question-linked factors. Where possible, Likert scales generate ranked (ordinal) data on constructs or indicators. In addition to these deductively inspired closed questions, the semi-structured online survey instrument and its hard-copy classroom variant also included some open-ended (inductive) sections. Open-ended instrument sections gave respondents the ability to express themselves more freely so that overlooked issues could emerge inductively.

The research analysed the survey in two steps. First, Wave 1 responses, in 2017, were analysed descriptively and graphically. Subsequently, once I had obtained a complete sample of responses, after Wave 2 returns in 2018, I analysed the full data set of results, using exploratory and inferential statistics.

4.2 Step 1: Descriptive and graphical analysis

4.2.1 Respondent profiles for RO3.1

The researcher sourced its convenience sample of second language learners and linguists from personal professional networks and social media. My target sample of survey respondents was 150 people but, of the initial batch of over 208 whom I contacted by email, only 114 responded, which represents a 54.8% response rate. To anonymise analysis each candidate respondent was allocated a unique ID from 1-208 in the initial sample frame, so

even though only 114 initially responded, reported ID numbers can exceed this. Subsequently, for Stage 2 of the survey, I increased the sample size to achieve my initial target of 150 respondents (see 4.3 below). Although the bulk of the initial 114 respondents were European (mainly Russia or United Kingdom residents), other countries were represented, including Australia, France, United Arab Emirates, Hong Kong, Brazil, Poland, Russia and Turkmenistan. Of this first sample, over one third (34.51%) of respondents were physically located in the UK (mainly England) but of these only 23.89% considered English their native tongue. Only 15% of the sample were born in the UK. Russia was the other main sampling focus. Over one third of the sample (34.51%) deemed Russian their native language (Q2) but only 26.55% were in Russia or were indigenous Russians (27.43% for Q3 country of birth). Most of the respondents were under forty-five (over sixty percent). The most prevalent age range was between 26-45 years (36.2%) as illustrated in Figure 4.3. Only a few respondents were retirees (5.31%).

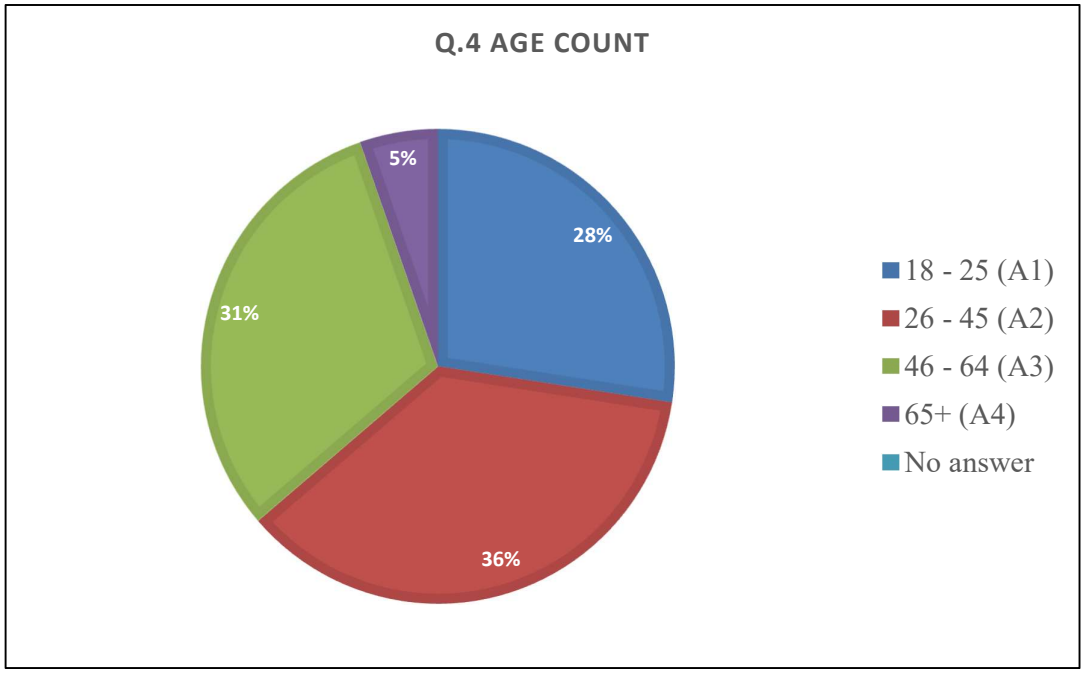


Figure 4.3: Respondents age profile (Source: Author, 2017)

About one quarter (25.66%) of the respondents were full time student's whist almost one fifth (18.58%) were instructors. The majority (55.75%) belonged to a range of mostly professional occupations. Due to the range of replies to Q.6 Occupation, the data had to be cleaned before it could be analysed, particularly in relation to the instructor's category where the range of sub-categories given by respondents complicated data interpretation. Perhaps due to self-identity or status anxiety respondents gave idiosyncratic responses which had to be simplified to make the categories manageable. For example, teacher of French became simply teacher. Difficulties remained with for example R86 who considered herself a hypnotherapist, teacher and hypnotherapy trainer. She was not classified as a teacher but her designation as a non-instructor is open to question. Other roles included military officers, IT professionals, and general managers, civil servants, medics, musicians, accountants, designers and retirees. Effectively, the sample appears biased towards the professional classes or so-called symbolic analysts (Reich, 2010).

Table 4.1: Occupation breakdown

Student	20.7%
Teacher	6.4%
Tutor	2.9%
Academic	2.1%
Educator	0.7%
Lecturer	2.9%
Professor	4.3%
Instructors	15.0%
Other	45.0%
TOTAL	100%

The gender balance of the sample was skewed towards females (60.18%). Probably, the bias results from convenience sampling predisposition in terms of personal contacts, although conceivably it could be that women are more inclined to respond to surveys in the field or perhaps more women are involved in synchronous online learning. Over two thirds (66.4%) had less than five years' involvement in language learning (Q.7) but 13. 27% claimed over 15

years' exposure to ESL and were likely to represent language instructors rather than dedicated students.

For Q.8 on computer competence with various platforms, Figure 4.4 illustrates that most of the cohort were either "Very competent" (38.94%) or at least "Moderately competent" (40.71%). Only 3 respondents (2.65%) considered themselves novices.

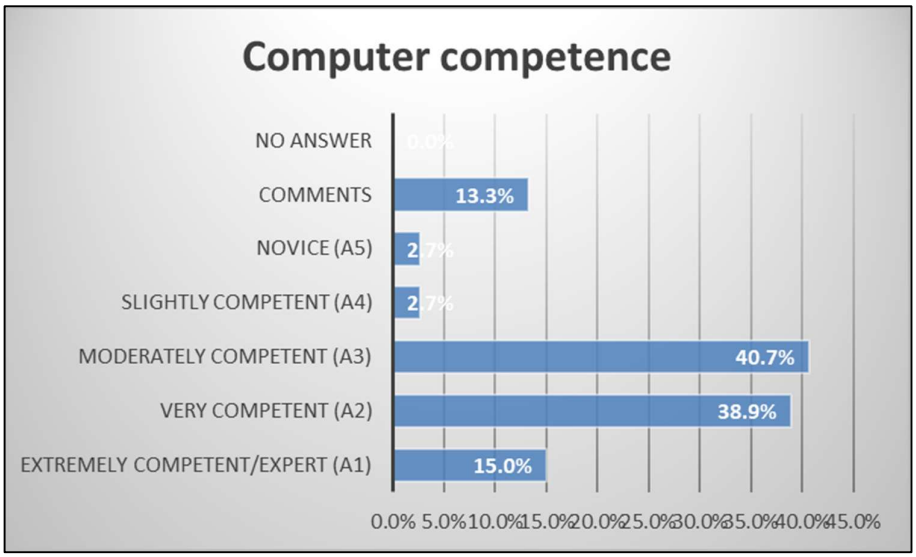


Figure 4.4 Computer competence (Source: Author)

Participants were anonymised by giving them a number and participant quotes are presented in italics. The diverse range of computer competencies is reflected in the comments of some respondents. For example, R114 had, *designed and helped design online learning courses for over 25 years but [she had] some experience with language-learning courses from working with colleagues and graduate students from other countries or who speak languages other than English.* R136 had a similar level of competence with, *Microsoft Office, Programming, Statistical Analysis SPSS and RStudio analysis package*. On the other hand, some respondents like R183, were aspirational teachers who had not yet *started with giving online lessons to anybody but yes, I help people on WhatsApp or Facebook in learning*

German like in grammar etc. I will be glad to start giving informal e-learning language lessons. Some students provided a useful range of details on their exposure to linguistic software. For example, R193 had, *been using computers since 1985* or R195 who, used *Skype to study French and Zoom to study English.*

Q. 9 provided details of actual hours of language teaching or learning (How many hours per month do/did you receive/give informal e-learning language lessons (e.g. via Skype)? Again, the investigation revealed a diverse range of responses. To provide indicative summary statistics, the data were cleaned so that answers provided by some respondents were interpreted into deemed hours. So, for example the 10-20 hours per month for R23 was deemed 15 hours. On average, sample respondents spent 11.9 hours per month (approximately 2 hours 45 minutes weekly) engaged with online language learning/teaching. However, a wide dispersion in the hours spent in online language learning is confirmed by the sample standard deviation of over 14.3. This means that it is quite difficult to capture the representative student hours studied. For example, study deemed just over six hours a week as the full online engagement for two thirds (68.2%) of students/teachers in the sample. Nonetheless, R183 studied 90 hours monthly while R16 had little online language learning experience.

4.2.2 EA impact on learning for RO3.2

Having covered the broad parameters of the respondents, it is now useful to turn to the question of emotional attachment (EA) itself. Q.10 asked respondents directly whether, in their view, emotional attachment affected second language learning. The results were overwhelmingly positive with almost two thirds (73.45%) agreeing either very strongly or strongly. Less than 1% of respondents dismissed the role of emotions in learning.

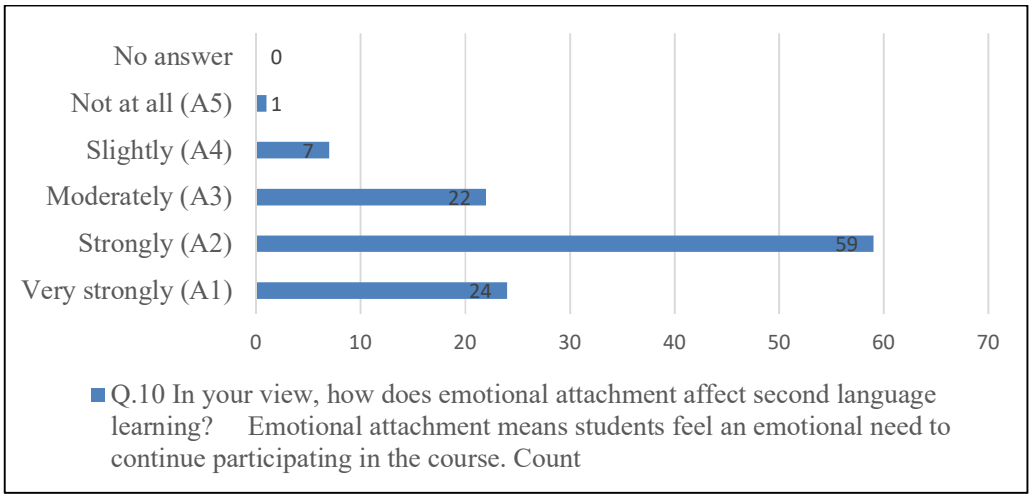


Figure 4.5: Respondents view on EA (Source: Author 2017)

Q.10 was semi-structured, and respondents had an opportunity to share their thoughts on the importance of EA. One inductive insight which emerged was that the student cohorts were very diverse with some highly motivate students who likely needed very little emotional support, for example, R19 who was *constantly looking for ways to keep up with my German language skills and take on board new trends*. Others, like R23 appreciated emotional support because she had,

> *tried to learn English in speaking clubs and tandems and usually it was boring because even if I could speak English fluently, I couldn't find interesting things to discuss. I don't want to speak with boring person in my native language, why I should have lessons with boring teacher? I can discuss travels and life in my motherland, it's enough for 1—2 lessons I call it "safe articles" but then I feel that I am tired. So yes, no matter how educated as a teacher, for me it's important who is he/she as person*.

R63 revealed that Emotional Attachment was one of several influences while R73 noted learning for her was easy and fun. Perhaps more illuminating was the comment by R94 that, *online language learning is addicting, obsessive and compelling sometimes*. However, R177 dismissed EA in the context of learning as inappropriate. R103 touched on the notion of a

virtual online personality life and that, mood changes can influence language studies. R114 drew attention to the obvious intellectual point that *unless emotional attachment is properly defined, it is, often misinterpreted* [and] *can also mean very different things to students from diverse cultures and languages.* Notwithstanding these nuances and caveats, EA contributed positively to learning for R136 for whom it was a *main driver in the struggle to learn and understand.* Similarly, R189 considered EA, the *most important thing for learning a new language*, as did R195 who felt that, *without any emotional attachment it is impossible to study*. For demanding learning tasks, R193 need to be *concerned personally, thus emotionally enthusiastic*. R183 was less enthusiasts. For her, EA was only *quite necessary*. Some respondents like R208 taught online, although their main teaching focus was not second language learning classes.

4.2.3 EA constituents for RO4

Q.11 and its sub-questions interrogated respondents on the importance of EA and its constituents. Q.11 initially reinforced confidence in Q.10 responses on importance of EA overall. The question asked whether respondents considered emotional attachment factors important for their online course. In general, EA factors are highly rated with 65.49% considering them as either critical (5.31%) or very important (60.18%). Fewer than 4% of respondents rated EA factors as negligible or unimportant.

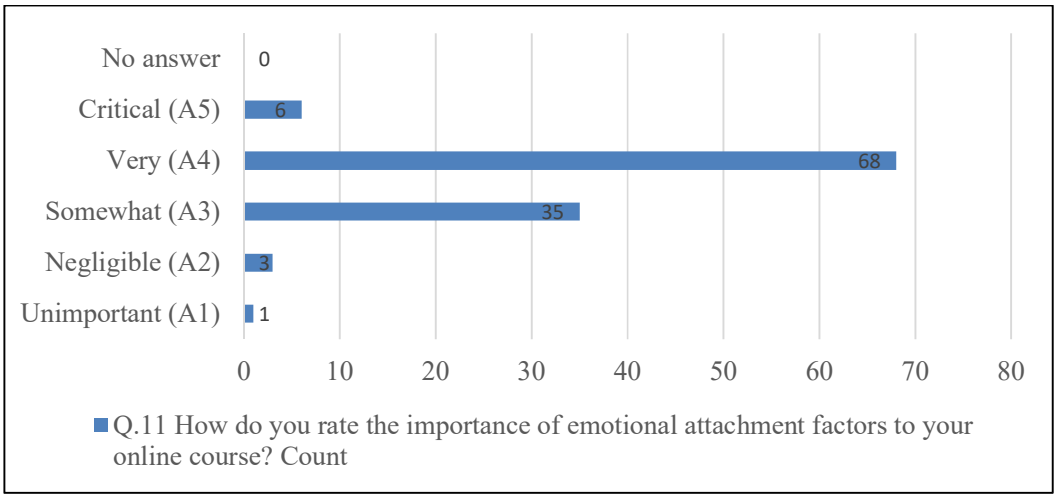


Figure 4.6: Rating of importance of EA (Source: Author, 2017)

Subsequent questions in the survey made use of the draft explanatory framework (see Figure 4.2) to break EA down into its individual components. The draft EA constituents emerged from the literature were Connection, Affection, Passion, Social Presence and Flow. Here in Section 4.2.3, I initially examined the impact of these various constituents individually but later, in section 4.3 below further analysis was conducted using exploratory statistical techniques and non-parametric analysis to ascertain the overall collective significance of these parameters among all the other factors influencing learning.

Factor 1 Affection

The explanatory framework (Figure 4.2) further disentangles the notion of affection into its constituent indicators such as friendliness, love, hope, use of emotion, humor, self-disclosure, expressing agreement (Q.11a, b, h, k, l, m, n, q). The majority (65 out of 113 or 57.52% of the sample) considered affection "very important" with an additional almost 2% expressing a view that it was "critical" as illustrated in Figure 4.7.

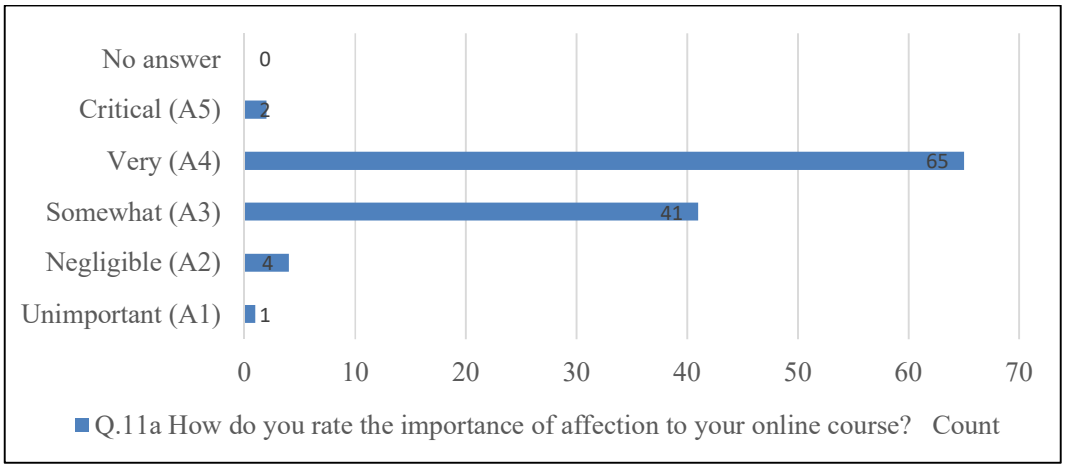


Figure 4.7 Importance of Affection (Source: Author, 2017)

Individually, the other constituents of Affection were also rated highly. 76 respondents (67.26%) considered friendliness "very important" and 16 (14.16%) rated it "critical". Figure 4.8 summarises the importance of all draft explanatory framework indicators of the construct of affection. The data strongly suggests that affection is a key learning driver.

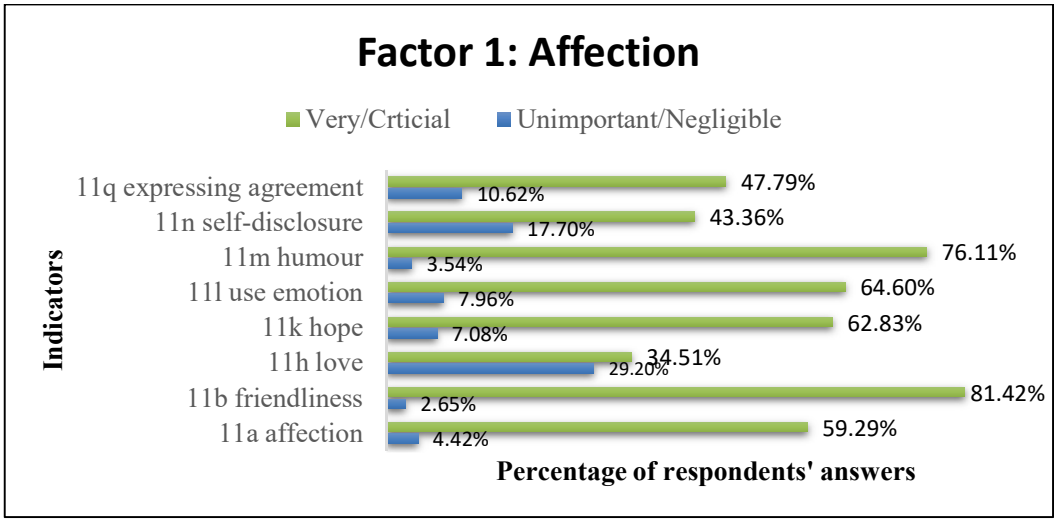


Figure 4.8: Stated importance of indicators linked to Affection

Factor 2 Connection

The construct of connection involves notions of Bonded or Connected. Informal online language learners rated connection an important emotional attachment constituent for

synchronous learning. The construct was probed with questions Q.11c, d, i, g, Q.12, Q.26. For the generic indicator of Connection itself, over 69% of respondents rated connection as very important or critical. Figure 4.9 illustrated the overall impact of all the other deemed aspects of the connection construct. Q.12 was an open-ended question about measures language instructors could take to enhance EA. Students mentioned the the term "friendly" on 12 counts. Other practical suggestions that emerged from responses to Q 12 included the importance of feedback, praise, listening, humor and original content. However, only R197 mentioned anything related to connection - *Create a connection with the individual.*

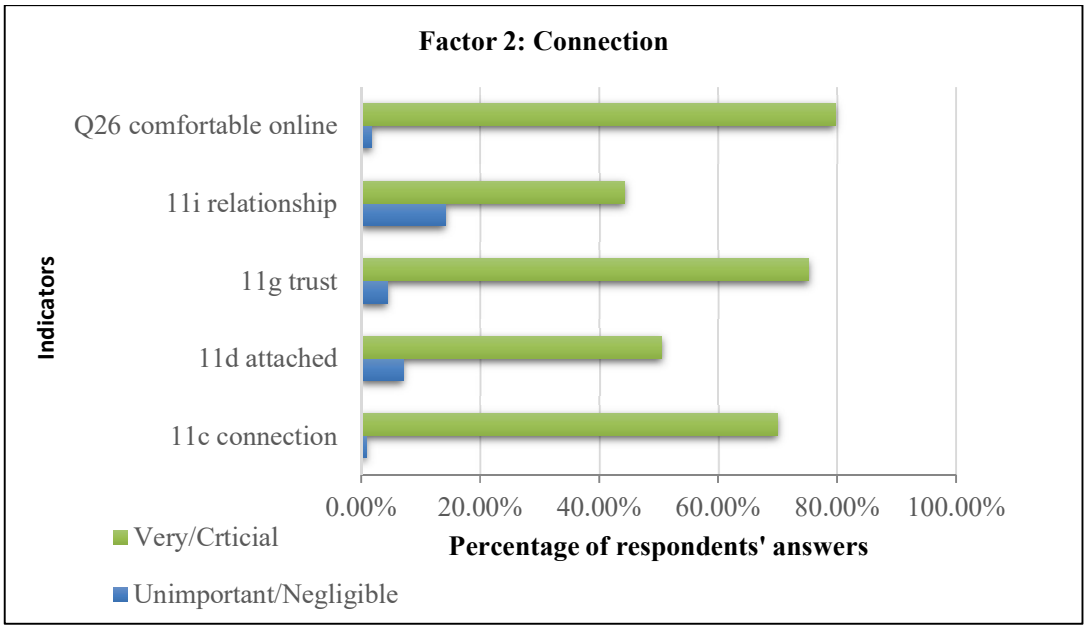


Figure 4.9 Stated importance of Connection

Factor 3 Passion

Learners and educator's passion towards online learning experience is measured by such variables as being Passionate (Q.11e) or Delighted (Q.11f). In open-ended questions, respondents mentioned the term "Passion" twice. For example, R94 advised on the

importance of *obsession, passion, at times depression and addiction to internet* and also in Q.12 where R49 stressed *passion, engagement and commitment* or again R73 - *Be positive, passionate, praise a lot for little progress, always smile!*

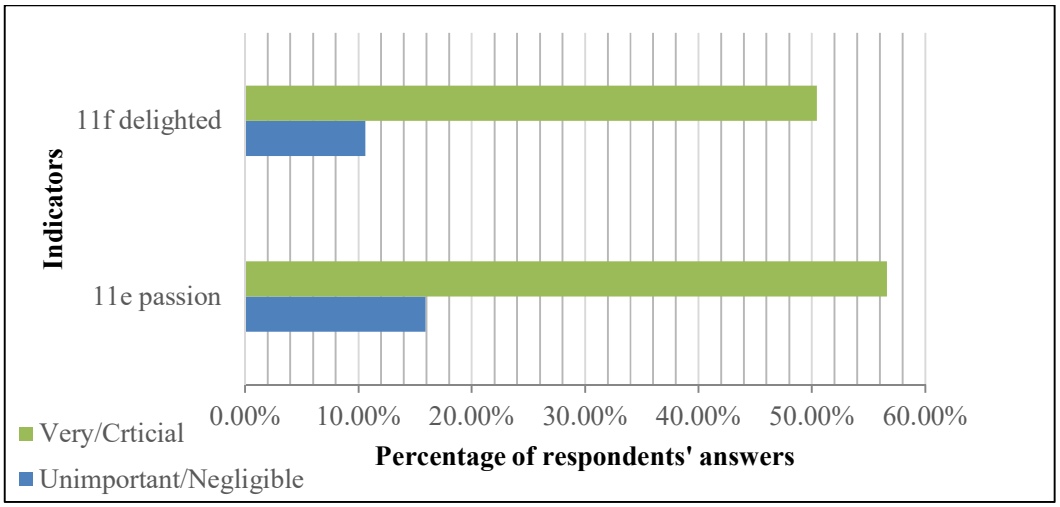


Figure 4.10: Stated importance of constituents of Passion

Graphical analysis above suggests Passion is an important EA constituent.

Factor 4 Social Presence

Variables of Social Presence include Group Cohesion (Q.11p, q, r, s, t, u, v, w, x, y), Q.22 (sense of community) and openness (Q.11 f, g, m, n). Figure 4.11 illustrated the amalgamated analysis of group cohesion indicators. Interestingly, vocatives, inclusivity and compliments or complementing were considered overall less important than questioning by

the instructors.

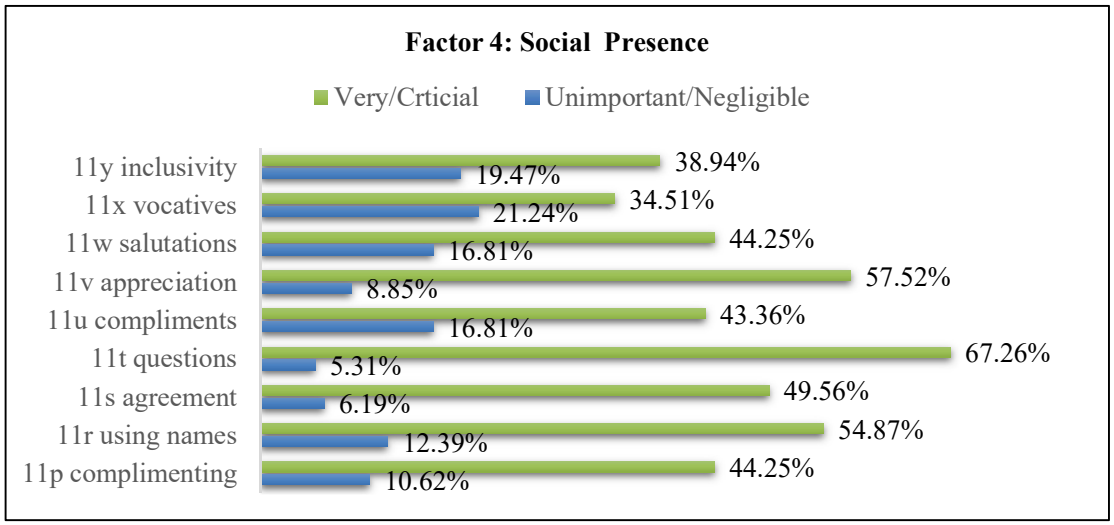


Figure 4.11 Stated importance of Social Presence

For Q.22, when asked whether instructor actions should develop a sense of community among course participants, 30.97% strongly agreed but 45.13% were less committed (somewhat agree) to this pedagogical Social Presence goal. The comments from R114 (academic) was that, *building a sense of community is vital and should occur from day 1 of the course by careful designs of a community place for learners to gather and share issues and solutions. The instructor needs to be a monitor of these discussions and intervene when necessary if the conversations at not helpful.*

For the openness aspect of Social Presence, Q.14 almost 80% (79.65%) of respondents were comforted (somewhat agree or agree) by the presence of the teacher who made them feel more secure. However, R103 considered that *Virtual presence in not real presence* while R114 stated that, decades of research indicated that *students are divided in their needs to learn with and without an instructor. The instructor is the one, however, who often is key in preventing discouragement and dropout and thus vital to the retention of students in online learning courses of all types.*

Factor 5 Flow

The survey instrument did not include any explicit question on the importance of Flow as it was deemed students would struggle to understand the notion. Nevertheless, indirect pointers to the notion of Flow were associated with questions on satisfaction or engagement in (Q.15,16, 17, 23, 26, 27, 28, 30), continuity (Q.19, 20, 21, 24, 29) and ease of use (Q.8, 18, 25). Inductive insights, relating to Flow, emerged from a range of questions. For example, R60 stressed the importance of *relevant interesting topics, visual stimulation, good quality sound*. R110, wanted *interesting games and activities*. R84 mentioned, *interesting course content, teacher's personality, good interactive software, speedy internet without any interruptions*. So, while there respondents hinted at the importance of a range of interesting participatory activities, Flow itself did not emerge from the open ended survey questions.

Other factors

For engagement, Q.27 asked whether the problems posed through informal online learning increased interest, 67.26%of respondents were positive, suggestive that engagement and flow made a difference. For Q.30, 84.07% of respondents were satisfied with online learning environments ("strongly agree" 32.74% or "somewhat agree" 51.33%).

Turning to continuity, Q.19 on the identification of areas of agreement and disagreement on course topics, nearly 85% of respondents agreed or strongly agreed. Q.20 asked whether the instructor should help to keep course participants engaged and participating in productive dialogue. This generated an overwhelmingly positive response with 70 respondents out of 113 (61.95%) strongly agreeing. Q.18 tackled the ease of use of informal online synchronous learning delivery and Figure 4. 12 clearly suggested that most respondents strongly or somewhat agreed.

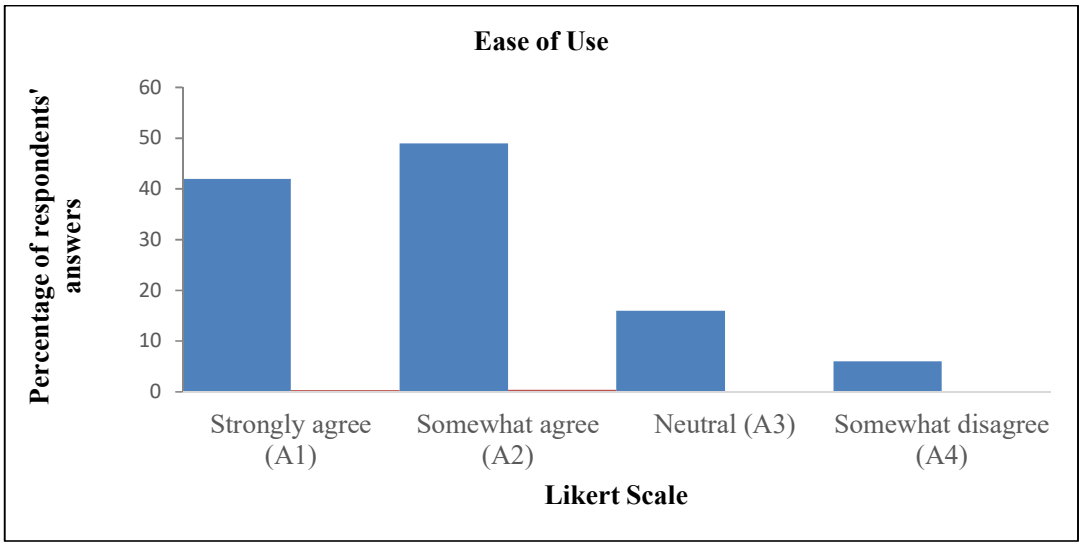


Figure 4.12 Ease of use of informal synchronous online learning platforms

The open-ended section of the question provided further useful insight. For example, R5 stated that ease of use *depended on course design and user interface* while R103 noted that it is *in the development stage. Lot of things to be improved.* R139 was very enthusiastic - *yes, it is easy learning+convenient* ☺☺☺☺☺☺☺☺☺☺☺☺☺. More thoughtful was R193 whose comment was: *Yes, but it requires simple and clear web sites which is not always the case.* Similar thoughts were echoed by R195 who noted that, *it depends a lot on the way the service was developed*. In short, ease of use and flow generated by synchronous online learning depends on the course, instructor and technology.

Constituent synthesis for the initial descriptive and graphical analysis

Using Chapter 4' descriptive and graphical analysis of respondent views, Table 4.2 collates indicative EA constituents before further statistical analysis.

Table 4.2: Evaluation of EA-ISOLL factors and constituents

Draft framework: potential EA factors		Indicative EA constituent (EA-ISOLL_V2)
Emotional attachment	XXX	
Affection	XXX	Affection
Friendliness	XXX	Affection
Connection	XXX	Connection
Attached	XX	Affection
Passion	XX	Passion
Delighted	XX	Passion
Trust	XXX	Connection
Love	X	Affection
Relationship	X	Connection
Fear	X	Connection
Hope	X	Connection
Use of emotion	XXX	Social presence
Use of humour	XXX	Social presence
Self-disclosure	XXX	Social presence
Continuing a thread	XXX	Flow
Complimenting others	X	Social presence
Expressing agreement	X	Social presence
Using names	XX	Social presence
Acknowledgement of others via agreement/disagreement	X	Flow
Acknowledgement of others via asking questions	XXX	Flow
Acknowledgement of others via compliments	X	Flow
Expressing appreciation	X	Flow
Group cohesion via greetings/salutations	X	Social presence
Group cohesion via vocatives	X	Social presence
Group reference/inclusivity	X	Social presence

Extremely important factor XXX- 

Somewhat important factor XX 

Relatively unimportant factor X 

4.3 Step 2 Statistical data analysis

After the initial sampling in 2017, by the end following year I had managed to increase the returned sample size to the desired 150 respondents by including an extra 36 respondents, most of whom were Chinese university students with parallel ISOLL exposure. For this Stage II statistical analysis, I used the entire survey respondent dataset. I used non-parametric and parametric exploratory and inferential statistical techniques, including regressions to try to identify the key factors influencing EA but also the other learning covariates (see definitions). In line with Larson-Hall (2015) and general current research practice, I adopted .05 or 5% as the significance threshold.

On reflection, the results of my Stage 2 statistical analysis (on complete sample – Wave 1 and Wave 2 combined), rather than providing a complete answer the RQ1 on emotional attachment and second language learning in informal synchronous online learning contexts reinforced my disaffection with quantitative analysis as a methodology to provide meaningful nuanced answers in a field where there is such considerable contextual variability in diverse culturally-sensitive language milieus. Leaving these philosophical questions to one side for the moment, procedurally the second (statistical) step of the survey analysis met the third thesis objective (RO3) of ascertaining the relative impact of the learning context (O3.1) compared with EA (O3.2) on perceived learning success (LS). For RQ3.1, I found that EA differed significantly across student cohorts in different cultural and learning settings. For RO3.2, I found correlations between learning and EA, controlling for other factors.

Finally, the analysis in this second part of Chapter Four isolated the multi-faceted constituents of EA to answer RQ4. Formally and in line with the RQ and thesis objectives articulated in Chapter One and the hypotheses articulated earlier (s3.31):

- RQ3.1: Does LC influence LS? LC is insignificant (H-LD_0) for LS vs. the alternative hypothesis that cohort LS varies (H-LD_1)
- RQ3.2: Does EA significantly influence learning success? EA is insignificant for learning success (H-EA_0) vs. the alternative that EA is significant (H-EA_1)
- RQ4: What are EA's main constituents? (Associated sub-hypotheses are illustrated in Figure 3.5 – the RQ4 Constituents).

For this statistical analysis, notwithstanding that much of the data was ordinal, it was analysed using non-parametric and parametric statistics. With adequate cases and reasonably normal distributions, Likert scale ordinal data can be tested parametrically (Jamieson, 2004). Indeed, even with skewed, autocorrelated or heteroskedastic data, Norman (2010) suggested that parametric tests give reasonably accurate and unbiased analysis. The quantitative analysis, classified 150 respondents into four pragmatic geographical cohorts, recognising that the split was somewhat arbitrary as the groups span a wide spectrum of divergent countries and educational systems. For example, the Middle East and rest of Asia cohort amalgamated Indian and Asian students but excluded Chinese ones who were separately categorised due to their relatively large numbers.

Table 4.3: Student cohort (Learning Context) regional groupings with comments

Country	Members	Comments
Western	EU, USA	Greece and Germany diverge significantly. Latvia is included.
Eastern	RF, Ukraine	Politically separate and at war.
Middle East and rest of Asia	KSA, Oman, UAE, Israel, Iran HK, India, Pakistan Malaysia, Indonesia	Israel, UAE, HK have quasi Western education systems, but Indonesia is very different.
China	PRC	Only one provincial university sampled in a vast and diverse country.

Key variables were stated or perceived EA – the independent variable (IV) and LS for Learning Success - dependent variable (DV). LS was a composite index, computed from six unweighted indicators (*Meets Needs, Learning, Loyalty, Ideal, Success in Learning and Easy Follow*). A Cronbach Alpha of 0.83 confirmed that these indicators of LS moved together and so were, at least internally, reliable indicators of learning success, although philosophically and qualitatively such a superficial interpretation is questionable (see s7.7, research limitations).

Exploratory data analysis

To investigate the influence of learning context (LC) on Learning Success (LS) (RQ3.1), EA's influence on LS (RQ3.2) and the constituents of EA (RQ4), the research analysed 150 responses. The research examined the data for outliers but did not remove the three instances where LS = 5 (Excellent). It seems reasonably plausible that a handful of students were genuinely delighted and felt they had made real learning progress. Therefore, the research bore a negligible risk of misleading outlier influence (Fielding & Gilbert, 2006). Table 4.4 provides the summary descriptive statistics. The LS mean score was 3.2 with a standard deviation of 0 .68. Given the low standard error (se) of 0.06, the mean LS score likely reflected the population and 68% of student perceptions fluctuated 1 standard deviation

(sd or σ) either side of the mean. Generally, Chinese students expressed relative confidence in their own learning success. The Russian cohort varied, perhaps reflecting the artificial lumping of diverse republics in their single category.

Table 4.4: Descriptive statistics for learning success (LS) and emotional attachment (EA) variables

	N	Likert mean	SDσ
LS	150	3.3	0.68
EA	150	3.8	0.84

Learning Context	"Learning Success" mean score	N	σSD
AME	3.41	13	0.44
China	3.81	33	0.53
Russia	3.15	42	0.82
Western	3.10	62	0.53
Total	3.30	150	0.68

The research analysed the data using parametric and non-parametric techniques. Compared to parametric tests, non-parametric tests make fewer assumptions about the data and are less prone to outlier distortions. When assumptions hold, parametric tests are more powerful. However, when conditions are violated, inferential statistics such as regression coefficients, although unbiased are inefficient and possibly unreliable. Also, with this type of data, standard error estimates are wrong so that the true data variability is understated which inflates model fit (R^2) and increases the chance of Type 1 error or incorrect rejection of the null hypothesis or so-called false positives (Bennett, Allen, & Heritage, 2018; Brook & Tsolacos, 2010; Fielding & Gilbert, 2006). Therefore, prior to inferential analysis, graphical and diagnostic tests evaluated linearity and conformity to parametric data assumptions, including a reasonably normal distribution. The research assumed LS was interval and that the residuals or differences between actual observations and fitted ones have or are:

- Mean of zero, $E(u_t) = 0$ with a constant variance, $Var(u_t) = \sigma^2 < \infty$
- Independent or uncorrelated with predictors, $Cov(u_t, x_t) = 0$
- Uncorrelated with each other, $Cov(u_t, u_j) = 0$
- Normally distributed. $Ut \sim N(0, \sigma^2)$.

Heteroscedasticity is the opposite of constant residual variance where residuals or noise buffets the DV systematically beyond the IV drivers influencing the scatter of model errors (Fielding & Gilbert, 2006; Brook & Tsolacos, 2010; Bennett et al, 2018). With heteroscedasticity, although OLS coefficient estimates are not biased, they become inefficient and standard errors unreliable (overestimated t-scores or lower p scores). A Durbin–Watson test below 2 or over 4 suggests heteroscedasticity or pockets of data influenced factors other than those modelled.

Ordinary Least Squares (OLS) regressions assumes residuals are normally distributed or $Ut \sim N(0, \sigma^2)$. To detect outliers and investigate linearity and variance equality, the research plotted dependent variable (LS) against the independent one (EA). To check deviations from normality (skewness), actual against expected cumulative regression residuals (P–P plot) were plotted. As extreme outliers can pull regression model towards themselves, the research used studentized rather than standardized residuals. According to Brooks and Tsolacros (2010) for sufficiently large sample sizes, "violation of normality assumption is virtually inconsequential" (p. 168) though it is good practice to eliminate outliers unless this fudges results or eliminates useful information.

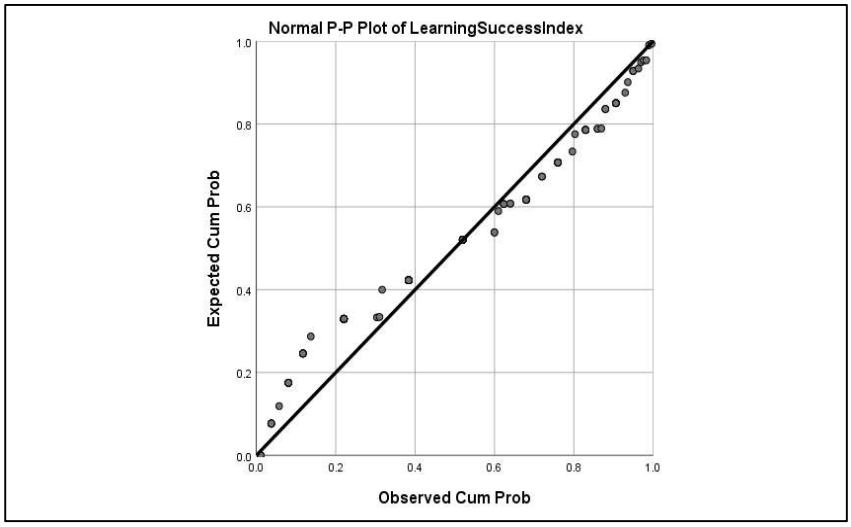


Figure 4.13: P-P plot of Learning Success, illustrating moderate dive normal distribution.

The P-P plot suggests obvious departures from normal distribution, confirmed by skewness statistics. Negative skew indicates that the tail on the left side of the Learning Success (LS) distribution is longer than the right side – the bulk of the values lie to the right of the mean. The -2.1 result suggested the departure from normality is just on the acceptable threshold. The computed z-score for skewness is (-2.027/0.198) = 10.24 which exceeds the critical recommended level of 3.29 for medium-sized samples (50 < n < 300). I therefore rejected the null hypothesis that the distribution is normal. The absolute kurtosis exceeded 7.1 threshold, suggesting a leptokurtic or peaked distribution. Testing the excess kurtosis (9.938-3/0.394) only confirms the absolute assessment. Overall, the evidence suggested parametric techniques could be compromised because the distribution of the dependent variable under investigation deviates from normality and could be distorted by outliers. Even though less efficient, prudence dictates the use of some non-parametric tests.

RQ3.1: Impact of Learning Context - independent samples

To answer the first component of the third study question: To what extent does emotional attachment influence informal synchronous online language learning, in different contexts? The research investigated whether student groups reported significantly different LS perceptions. If Learning Context (LC) influences LS (RQ1/H-LD$_1$), LS should vary between student cohorts. The box plot in Figure 4.14 suggested variation between cohorts or intra-group diversity.

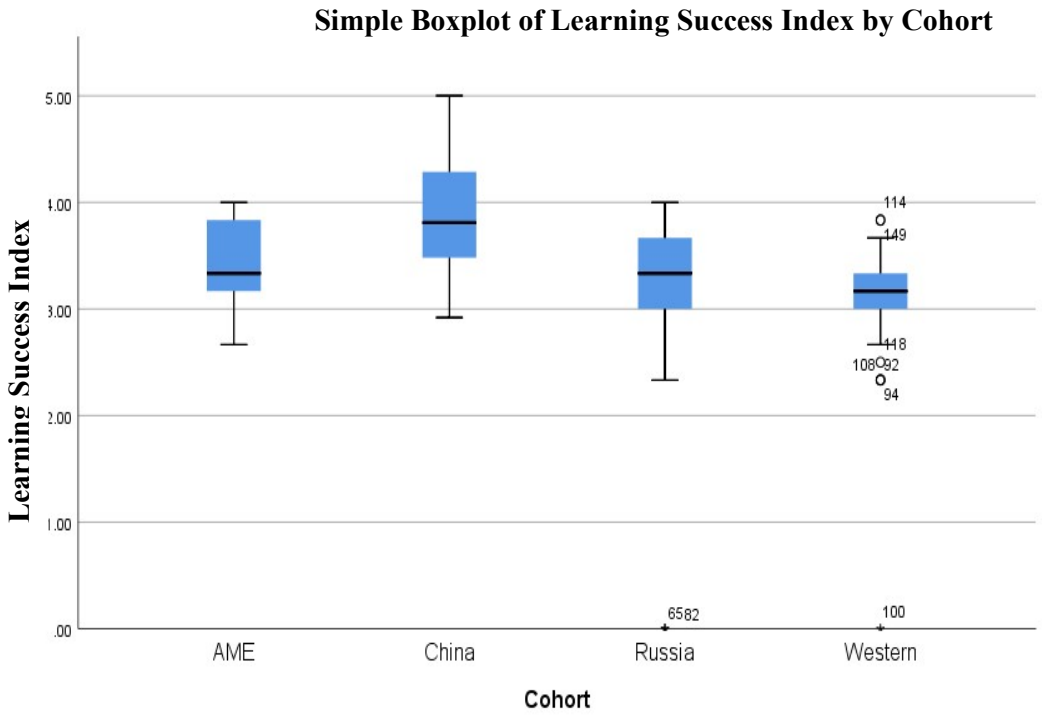


Figure 4.14: Box plot of LS score for the four Learning Contexts (LCs).

Figure 4.14 suggested LC does indeed significantly influence perceptions of learning outcomes amongst student cohorts, illustrating high perception of LS in China and spread of LS results for the Western student cohorts. However, dispersion of the Western student LS perceptions illustrates limitations of the context categorisation adopted pragmatically by the

thesis. This cohort is diverse with outliers that could distort statistics. To compare mean Learning Success (LS) between the cohorts, the research also ran some diagnostic tests. The ANOVA result (see Table 4.5 below) indicates significant differences in cohort LS means. As the F-statistic is extremely sensitive to non-normality, LS scores were checked with Levene's Test to determines if cohort variances differed significantly enough to undermine the ANOVA (Bennett, Allen, & Heritage, 2018). Where sample sizes differ, unequal variances can influence the Type 1 error rate of the t-test alpha (often 0.05). The test statistic exceeded the .05 threshold and suggested similar cohort score variability ($p = 0.37$ or an unacceptable 37% chance of Type I error to reject null hypothesis of variance equivalence). While the Levene's result suggested that differences in cohort variances are insufficient to undermine the Student t-test (ANOVA) result, according to Delacre, Lakens and Leys (2017), the low power of Levene's test means it only picks up any real difference 63% of the time. The more robust Welch test (Table 4.5) increased confidence in the robustness of the results showing acceptable Welch's t-test that confirmed differences in cohort means. Further post-hoc pairwise tests could have teased out more information about group differences but, for O3, such additional testing is incidental (nice to know) rather than essential (need to know).

Table 4.5: ANOVA of Learning Success means across cohorts supported by insignificant Levene's test

ANOVA (Student t-test)	Sum of Squares	df*	Mean Square	F	Sig.
Between Groups	12.10	3	4.03	10.52	0.00
Within Groups	56.00	146	0.38		
Total	69.00	149			
Welch t-statistic	13.40				0.00

* df = degrees of freedom

For RQ1 non-parametric tests were run to investigate whether there was a significant variation between cohort means for the Learning Success (dependent variable). The Kruskall

Wallis (KW) test was highly significant (p = 0.00) and rejected the null hypothesis of independent cohorts at the 1% level. The KW test is robust for ordinal data (where spacing between adjacent values is not necessarily constant). Like the Mann–Whitney U test (for 2 groups), the KW compares the sums of ranks (Siegel & Castellan, 1998). A Chi-squared test, {χ2}, also confirmed divergence of LS between cohorts. The p = 0.00 (probability of obtaining the result by chance) was statistically significant so confirmed cohort perceived learning outcomes are different but without revealing the strength of this relationship. Pearson correlation coefficient (r) would show relationship strength but assumes normal interval data, so SPSS <means> procedure was adopted. We first tabulated the five cohorts and tested Eta {ϵ} which, like r, varies between -1 and +1. The procedure generated ϵ = 0.422 which suggested that cohort (*aka* LC) moderately influenced LS. The 0.178 ϵ^2, rather like R^2 in regression, suggests that almost 18% of LS fluctuation can be explained by cohort LC.

For RQ1; LC moderation of LS, the box plot and the battery of parametric and non-parametric diagnostic tests confirm not only that LS differs significantly between student cohorts but also that its impact is quite strong. To conclude for RQ1, I found that the learning context is significant for the stated learning success. Further post hoc tests to determine which groups differed were not conducted but the qualitative interviews (see Chapter Five) confirmed the influence of learning context on student perceptions of their success.

RQ3.2: Impact of EA on learning success (LS)

To investigate the second aspect of the third study RQ about the influence of emotional attachment on learning, the investigation evaluated two alternative hypotheses: either EA is insignificant for learning success (H-EA_0) or, its opposite, that EA drives learning success (H-EA_1). The researcher first inspected scatter-graphs and then used a battery of non-parametric tests and regressions to investigate the association between EA and LS.

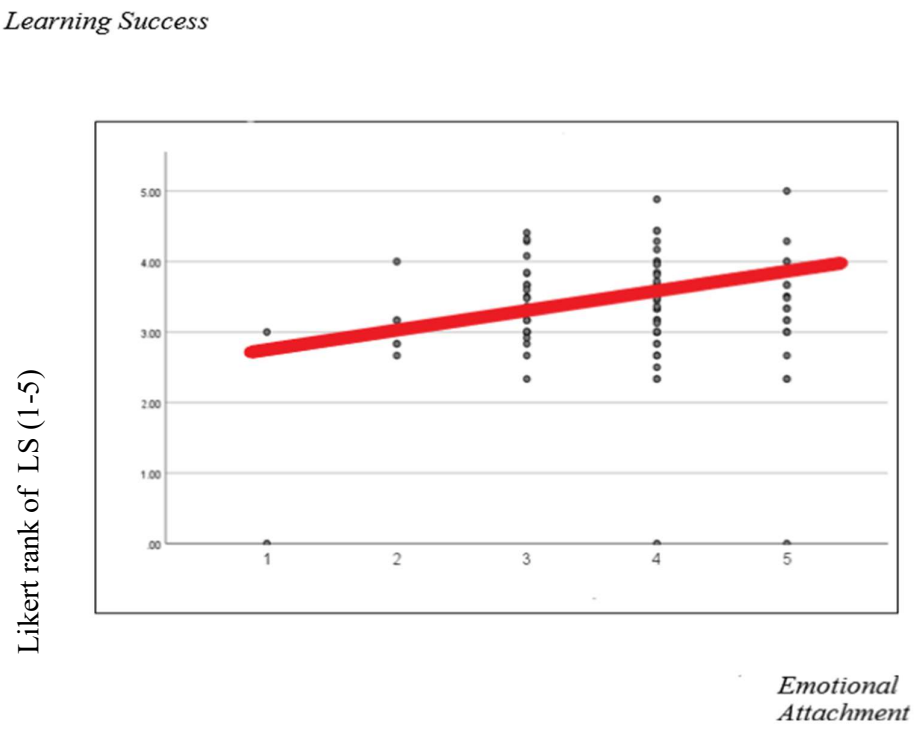


Figure 4.15: Scatter graph of Learning Success dependent variable (LS) against EA independent variable (EA)

Figure 4.15 suggested a weak positive linear relationship between EA and LS but the dependent variable (DV) dispersion indicates other factors at play and suggests heteroscedasticity or fluctuations in the spread of the DV with IV (independent variable). Hence, the project applied non-parametric tests to investigate the impact of EA on LS without

assumptions of normality. Table 4.6 illustrated the mixed results of the SPSS <means> procedure. Cramer's V (CV) is below the 5% significance threshold and suggests a strong relationship, Cramer's V and Phi, like r and Eta (ϵ) vary between -1 and +1. The CV of 0.218 implies that around 20% of fluctuations align. As Phi (Φ) only works for dichotomous variables, it was ignored.

Table 4.6: Non-parametric measures of association between EA and LS

Statistic	Value	Significance
Phi	0.38	0.046
Cramer's V	0.22	0.046
Eta	0.32	NA
Eta squared	0.10	NA
Spearman's rho	0.13	0.11

Eta (ϵ) also indicated that the IV (EA) affects the DV (LS). Eta (ϵ) of 0.32 suggested a moderate and positive association. Eta squared (ϵ^2) has same interpretation as R^2 and indicates that EA accounts for around 10% of learning success. The positive CV and ϵ support the rejection of the null hypothesis ($H\text{-}EA_0$) and support its alternative, that EA significantly influences LS. However, to confirm this influence, the impact of EA on LS Spearman's rho (ρ) was computed. The ρ statistic is another non-parametric alternative to the Pearson correlation coefficient. It was insignificant (p of 0.114) with p = 0.131 with undermined confidence in the strength of association between Learning Success and Stated EA Class.

Given these mixed non-parametric results and, notwithstanding some concerns about OLS assumptions, the research used multiple regression to investigate the impact on LS on various learning and emotional independent variables. Using SPSS, an Automated Linear

Modelling procedure and underlying educational theory (the moderated explanatory framework from Table 4.2 - EA-ISOLL-V2), stepwise regression helped identify potentially useful regression model variables. The research then ran four OLS regressions with a range of these variables. Only the last two regressions were significant at the 5% level ($p < 0.05$). Given the somewhat compromised distribution of the independent variable (LS), discussed earlier, the research used graphical techniques to check normality (P-P plots) and variance of residuals. The P-P plots suggested regression residuals were reasonably normal, but the residual plots illustrated a systematic upwards drift with DV. The implied heteroscedasticity undermines the efficiency of the regression coefficients. Ideally error should be randomly dispersed as IV increases (stochastic residuals). As discussed earlier, the research computed Durbin-Watson statistics and VIFs to check that, respectively, DV was decoupled with its previous values (autocorrelation) and model drivers were independent (multicollinearity).

Regression 1 forcing variables (IV) were Attached, Teacher Presence, EA, Passion, Relationship, Years ISOLL, Connection, Affection, and Initial Competence. The F statistic indicated in Table 4.7 was 1.49 with a p value was 0.22 so overall the model was not statistically significant and can be ignored, although using a hierarchical stepwise procedure might have rescued some variables. Table 4.7 illustrated indicative EA constituents after synthesis of survey responses which help to refine the draft explanatory framework (refined EA-ISOLL, Regression 1 statistics).

Table 4.2: Evaluation of EA-ISOLL factors and constituents

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3.31	9	0.37	1.49	0.22
Residual	4.95	20	0.25		
Total	8.26	29			

Dependent Variable: Learning Success Index

Predictors (IV): (Constant), Attached, Teacher Presence, Stated EA Class, Passion, Relations Connection, Affection, Initial Competence

For Regression 2, three obvious outlier cases were removed (R38, R108, R159), using a pairwise option, because the attribution of LS = 0, was presumably due to missing inputs. Previously insignificant EA and *Competence* were eliminated to assess the impact of EA constituents like Passion, Connection, Relationship, Attached and Affection could explain fluctuation in learning. However, overall, the model proved only just significant at the 10% level (p = 0.1 in Table 4.8). The overall explanatory power improved marginally to just over 18% (Adjusted R^2).

Table 4.8: Regression 2 statistics

ANOVA

R2	Sum of Squares	df	Mean Square	F	Sig.
Regression	3.14	7	0.45	2.00	0.10
Residual	5.42	24	0.23		
Total	8.56	31			

Dependent Variable: Learning Success Index

Predictors (IV): (Constant), Attached, TP, Passion, Relationship, Years ISOLL, Connection, Affection

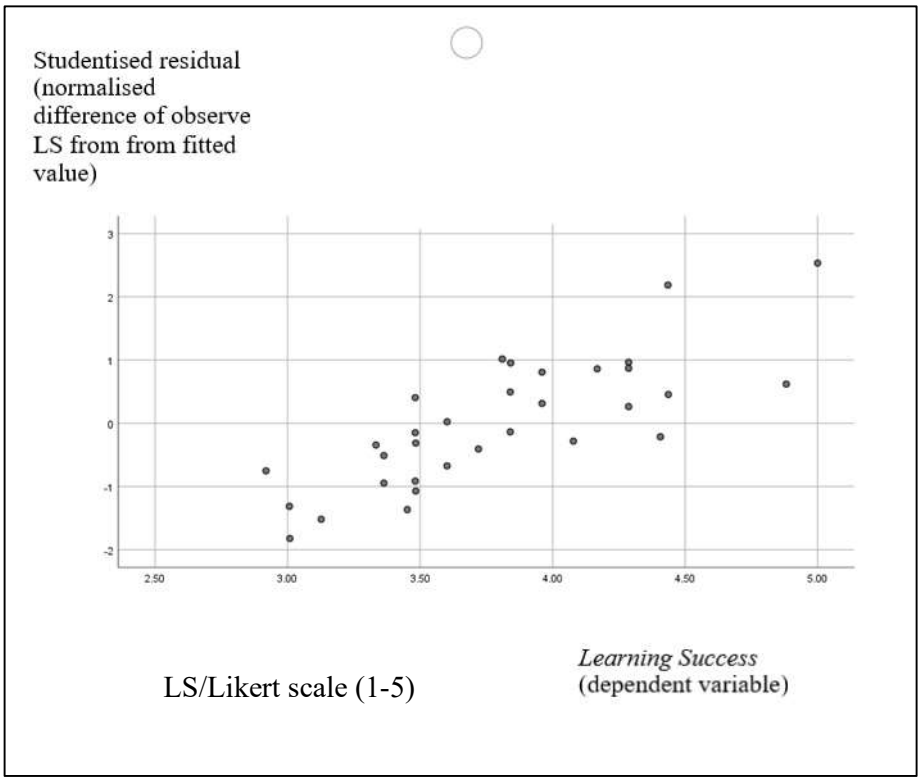


Figure 4.16 Plot of Regression 2 residuals against dependent variable, illustrating systematic upwards drift (non-stationary or auto correlated) and some heteroscedasticity (dispersion in variance)

Dropping the number of regressors from seven to five in Regression3 achieved significance (see Table 4.9) for the overall model but reduced its explanatory power to around 14%. At 5% level, *Affection* is only significant IV, but *Relationship* passes the 10% significance threshold.

Table 4.9: Regression 3 summary and coefficient statistics

ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	5.86	5	1.17	5.86	0.00
Residual	28.02	140	0.20		
Total	33.88	145			

Model Summary

Model	R	R^2	Adjusted R^2	Std. Error	Durbin-Watson
R 3	0.416[a] 3	0.17	0.143	.44739	1.85

Coefficients

	B	Std. Error	Beta	t	Sig.
Constant	2.29	0.22		10.27	0.00
Attached	0.04	0.05	0.08	0.80	0.42
Passion	0.03	0.04	0.06	0.62	0.54
Years ISOLL	0.01	0.01	0.13	1.57	0.12
Relationship	0.08	0.04	0.17	1.94	0.06
Affection	0.12	0.05	0.19	2.227	0.028

Dependent Variable (DV): Learning Success

Predictors (IV): (Constant), Affection, Relationship, Years ISOLL, Attached, Passion

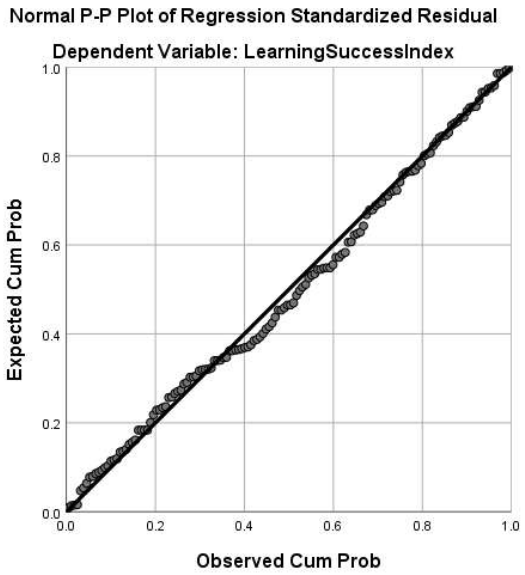


Figure 4.17 P-P plot for Regression 3, illustrating reasonably normal residuals

However, for Regression 3, the plot of the studentised residuals in Figure 4.18 suggested heteroskedasticity or pockets of data explained by factors other than those modelled. It illustrates upward drift (non-stationary or auto-correlated errors with some heteroscedasticity. The Durbin–Watson (1.85 in Table 4.9) reinforced the inefficiency of R3, in other words, a simpler model with fewer cases could explain Learning Success.

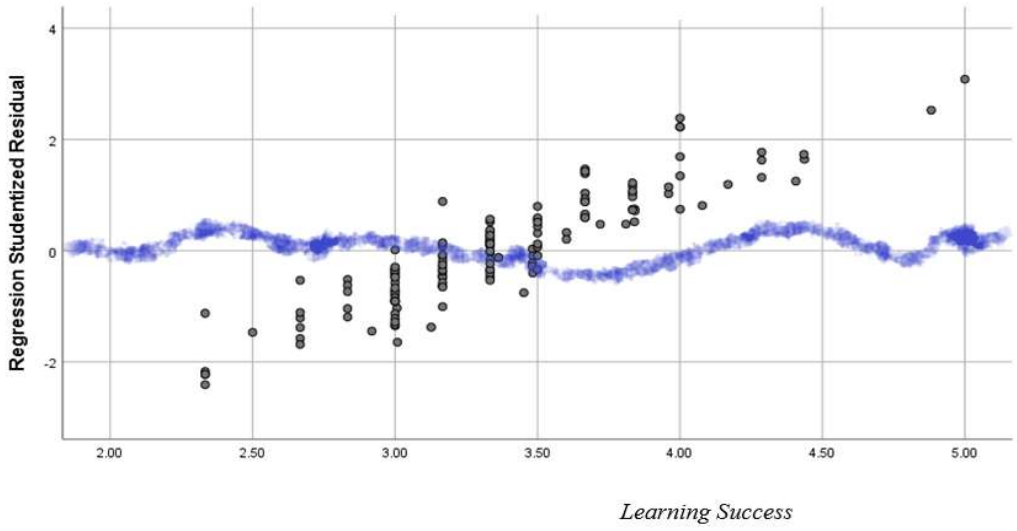


Figure 4.18: Residual plot for Regression 3

Regression 4 investigated the impact of Passion, Years ISOLL, EA, Affection, Relationship and Attached on learning but also introduced a *Learning Context* dummy, for full time university students*, using ISOLL* to supplement their formal programme. In hindsight (see study limitations), four dummies may have improved model fit, although reducing parsimony (Brooks & Tsolacos, 2010). Table 4.10 indicated that Regression 4 was significant overall with an increase in explanatory power to around 23%. However,

individually all independent variables except Learning Context, are insignificant. *Passion* coefficient has an unexpected negative sign. Although Figure 4.17 indicated a normal distribution of residuals, Figure 4.18 illustrated the split in cohort data. Perhaps, hierarchical regressions or further stepwise analysis could have improved parametric modelling.

Table 4.10: Regression 4 statistics

ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	9.10	7	1.30	7.24	0.00
Residual	24.78	138	0.18		
Total	33.88	145			

Model Summary

Model	R	R^2	Adjusted R^2	Std. Error	Durbin-Watson
R 4	5.18	0.27	0.23	0.42	1.9

Coefficients

	B	Std. Error	Beta	t	Sig.
Constant	2.65	0.26		10.01	0.00
Attached	0.07	0.05	0.12	1.35	0.18
Passion	-0.18	0.04	-0.04	-0.41	0.68
Years ISOLL	0.00	0.01	0.04	0.48	0.63
Relationship	0.02	0.04	0.05	0.56	0.58
Affection	0.12	0.05	0.03	0.36	0.72
LC	0.48	0.12	0.42	4.12	0.00
Stated EA	0.06	0.05	0.10	1.32	0.19

Dependent Variable (DV): Learning Success

Predictors (IV): (Constant), Attached, Passion, Years ISOLL, Relationship, Affection, Learning Stated EA

The research used the explanatory framework to run four regressions. Only R3 and R4 were significant, as indicated by significant F tests at the 5% level. All models had disappointing explanatory power with their variables only accounting for under a quarter of learning success. In R3, apart from the constant, only Relationship and Affection were significant. R4 had the highest explanatory power of 23% but none of its IVs were significant except for the *Learning Context* dummy. Following Cressie (2009), the likely technical explanation for these inconclusive results is that that cohort system diversity swamps the impact of EA or other learning drivers (Tweed & Lehman, 2002). In hindsight, improved regression results could have been generated using a hierarchical stepwise approach, but this would only not address concerns about the limitations of research design, with diverse learning settings introducing too much variability to isolate the impact of EA.

RQ3.3: Constituents of EA

The third RQ sought to untangle the constituents of the multi-dimensional EA notion. The average student rated their EA to class or course at 3.84/5 although opinions varied widely ($\sigma = 0.844$). The explanatory framework (see Figure 4.2) postulated a latent EA variable with five main constituents: Affection, Connection, Passion, Teaching Presence and Flow.

Factor analysis

Principal Components Analysis (PCA) or Factor Analysis is a data reduction technique, that helps identify patterns or variables groupings, indicative of an underlying components or EA-ISOLL constituents. The variables investigated were Affection, Connection, Attached, Passion, Teacher Presence, Relationship, Friendliness, Delighted, Trust, Love, Fear, Hope, Affective Expression Humour, Self-Disclosure, Communication, Acknowledgement, Appreciation and Salutations. Iterations were run by varimax rotation on high EA scores using principal components extraction and correlation. Factors were extracted if Eigenvalue >1 but parallel analysis would likely improve results (see study limitations in Chapter Six). To identify factor loadings or EA-ISOLL constituents the analysis generated four main components as illustrated in Table 4.11. The first four explained most of the cumulative variation.

Table 4.11: Principal components analysis of EA, using Varimax with Kaiser Normalization

Factor	1	2	3	4
Affection	-.345	-.164	.445	.685
Connection	.267	-.124	.922	.003
Attached	.572	-.111	.557	.444
Passion	.831	.353	-.163	.125
Teacher Presence	-.219	.020	-.117	.206
Relationship	.422	.583	-.570	-.137
Friendliness	-.070	.194	.065	-.018
Delighted	.891	.161	.069	.021
Trust	-.143	-.368	-.347	.678
Love	.403	-.060	-.765	.049
Fear	-.079	-.372	.302	-.332
Hope	.478	-.165	-.125	-.015
Affective Expression	.091	.925	.054	.154
Humour	.196	.841	-.154	-.064

Self-disclosure	.605	.045	.023	.073
Communication	.277	.083	.122	.828
Acknowledgement	.029	-.369	.058	.064
Appreciation	-.410	.452	-.069	-.103
Salutations	-.123	-.196	.092	-.679

Passion and Delighted dominated the first component. The second component (column 2) is characterised by Affective Expression, Humour and Relationship. In contrast, the third component loads negatively on Relationship and Love and one could consider these students cognitively and instrumentally orientated, rather than emotionally driven.

Nearest neighbour analysis

The k-nearest neighbour (NN) algorithm is a non-parametric classification method which uses neighbour distance to weight and assign observations. The study applied NN to resilient regressions variables Teaching Presence, Years ISOLL as well as EA. NN iteratively trained itself on part of the data (training variables) and then tested its Learning Success predictions to find natural data groupings.

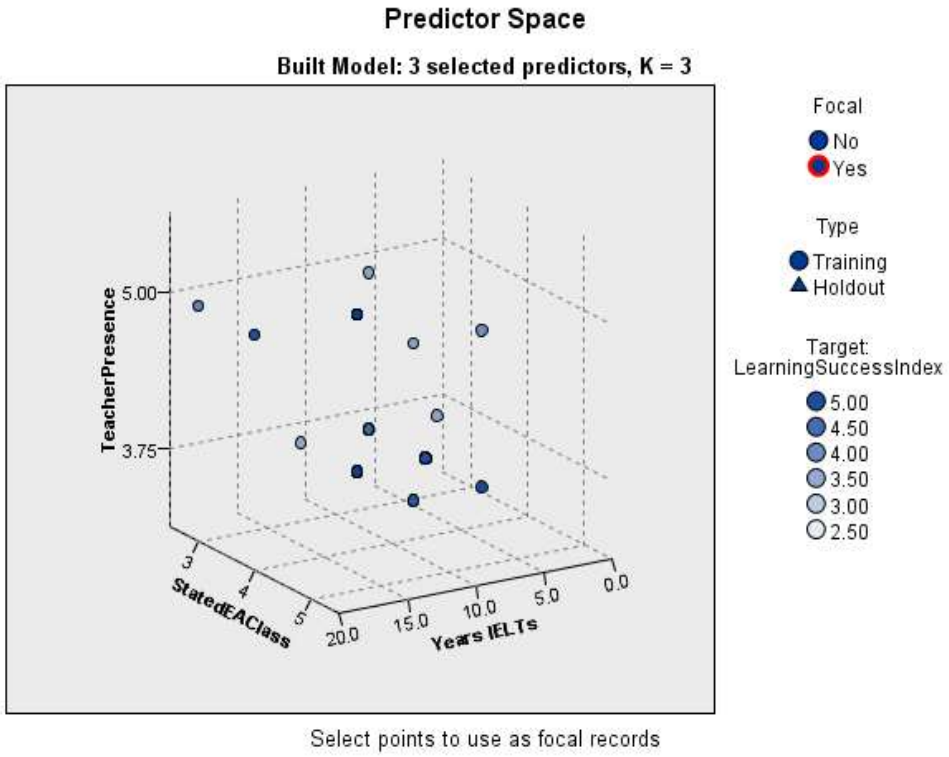


Figure 4.19: K-means NN analysis

The NN output in Figure 4.19 seems to indicate that the LS is mainly influenced by years of ISOLL experience or Teaching Presence, suggesting that EA varies by teaching exposure with both inexperienced and highly experienced groups influenced by emotions. Student stated importance of EA seems to have less influence on LS. Presumably inexperienced students depend more on their instructor for success compared to veterans.

Classification tree (CHAID)

Chi-square Automatic Interaction Detector (CHAID) is a non-parametric diagnostic tool to help untangle variable relationships. The CHAID predictive model, or tree, suggests learning hinges on Relationship, with a clear split in the behaviour of the DV above or below Relationship = 3 (Good). Above the Likert median, the data spits into two groups: students

with relatively distant relationships (3.18) and those feeling closer to their L2 instructor bonds (3.5).

Having analysed the survey data, descriptively and graphically and conducted a battery of statistical tests, for the fourth study objective/question (RQ4: Constituents), the Hypothesis Matrix (Figure 4.20) summarises the results of the quantitative analysis conducted in this chapter.

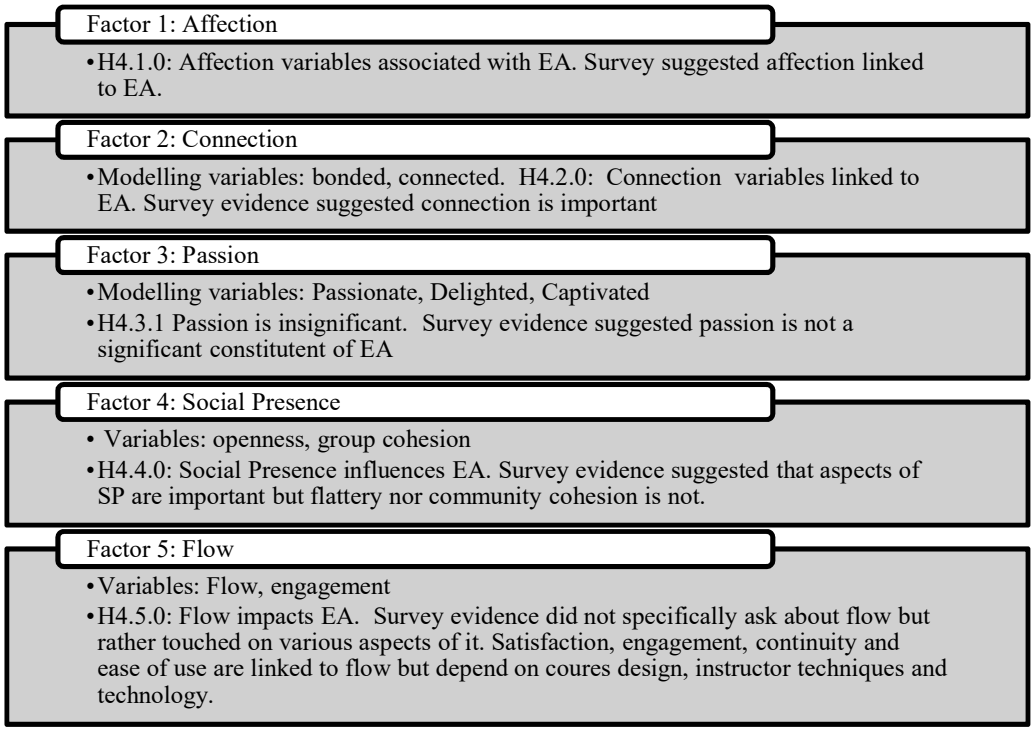


Figure 4.20 RQ4 (constituents) sub-hypothesis results following descriptive, graphical and statistical analysi

Summary of statistical results

For Stage I of the Empirical Phase, the study surveyed online L2/LX learning stakeholders (instructors and students) in two waves - 114 (Wave 1) and 36 (Wave 2), making a total of 150 respondents. Statistical analysis of responses found stated learning and emotional engagement differed significantly across cohorts. Non-parametric techniques

indicated that EA had an impact on learning, but regressions were inconclusive. Only cultural milieu or learning context (LC) was significant ($p < 0.05$) for LS. However, exploratory techniques like Factor Analysis hint at a dynamic mix of emotional or cognitive motivations during the student learning journey, involving structural breaks in student/instructor relationships. Nearest Neighbour and Classification Tree analysis confirmed a diversity of student groupings with respect to their emotional engagement in learning with a structural break in the relationship with instructors, as learning experience increases. The statistical analysis intimated that the EA-ISOLL draft framework (Figure 3.6) needed some refinements, including the elimination of Passion but inclusion of more contextual factors, like culture and institutional conditions in parallel learning environments (where applicable). Overall, the statistical results gave a mixed picture and suggest that covariates act in a complex fashion to mask the subtleties of EA and learning interactions. These findings echo the wider debate between advocates for nomothetic (aka quantitative statistical) and more idiosyncratic research approaches to gain meaningful knowledge. To resolve this nomothetic/idiosyncratic conundrum and investigate the nuanced interplay of context, culture and covariate factors influencing learning, the research conducted some qualitative interviews in order to be able to refine and validate the EA-ISOLL framework.

4.4 Chapter summary

The fourth chapter of this thesis on informal synchronous online language learning (ISOLL) analyzed the perceptions of 150 students and instructors. Survey respondents came from a global convenience sample of L2 learners and instructors in a range of countries, including Russia, China and England. The survey was sent via email or distributed in class to university students who studied English informally online to supplement their formal studies.

The survey questions were geared around the draft explanatory framework (Figure 4.2) and probed the influence of the learning context (RQ3.1) and the relative significance of EA (RQ3.2) compared to other learning covariates. The survey also investigated the constituents of EA to help answer RQ4. The mixed-methods research meant that the survey instrument included some open-ended questions, designed to tease out qualitative nuances for greater insight into the EA problem and for RQ5 (Pedagogy). However, the bulk of qualitative analysis is reserved for Chapter Five following. The research analyzed the survey data descriptively, graphically and statistically. Statistical analysis involved non-parametric, inferential statistical analysis (regressions) and exploratory techniques (Factor Analysis and CHAID). The mainly nomothetic survey analysis conducted here in Chapter 4 did not yield a definitive answer to the EA-learning conundrum. It suggested that cultural and social context strongly influence perceived learning success which chimes with the distributed cognition (Cole & Engestrom, 1993) or Wundt's (1920) earlier psychological literature. Unlike in the psychology attachment literature where attachment disruption or anxiety featured prominently (Bowlby, 1973, 1979), data analysis downplayed the importance of fear which did not load strongly on any of the EDA Principal Component factors (see Table 4.11). There is some suggestion that, in certain circumstances, EA influences learning but other factors, like learning experience or Teaching Presence, seem more important. In terms of the constituents of EA, statistical analysis downplays the importance of passion and fear. Overall, the mainly nomothetic analysis does not fully answer I research question and so the research conducted further qualitative, idiosyncratic investigations. To enrich qualitative interpretation of EA, Chapter 5 presents an analysis of the expert interviews.

Chapter 5 Results expert interviews

5.1 Overview

Chapter 4 analysed survey responses of L2 language learners and instructors and found evidence that emotional attachment plays a role in learning. However, a more complete answer requires further qualitative insights. Chapter 5 analyses seven expert interviews conducted to triangulate the literature, surveys and embedded L2 reflections. It is important to note that the experts had over 10 years general teaching and more than two years online synchronous teaching experience, mainly in one-on-one situations rather than in group contexts which may well influence the results in terms of EA constituents. Finally, the interviews also provided pragmatic pedagogical insights for language instructors including influences on learning.

The insights from Chapter five help to answer the main study research question introduced in Chapter 1: *How can emotional attachment enhance second language learning in diverse informal synchronous online learning contexts?*

The study used a pragmatic convenience sample of experts. On reflection and with the benefit of hindsight and maturation as a researcher, I should have been much more sensitive in the way I selected my interviewees to ensure a diverse mash-up or meshwork of viewpoint assemblages and multiplicities of gender (Heigham and Croker 2009; Bettez, 2015). Also, for any future research (as detailed in s. 7.2), I would handle communication with participants much more sensitively to help avoid any inadvertent social or sexual identity conditioning that could undermine my qualitative interpretations or the trustworthiness and usefulness of my research (Heigham and Croker 2009; Rallis and Rossman 2009; Woodfield, 2010).

Emails were sent to experts or L2 instructors that I knew from my experience as a language teacher or met at language learning conferences. These experts had at least two

years, mainly one on one, synchronous online language teaching experience. Seven experts responded to my invitation (see Appendix B for participant information and consent and interview questions for experts).

Some were interviewed via Skype with their answers being recorded and subsequently transcribed, and some preferred to answer in writing. As part of ethical obligations to the respondents, interviewees anonymity and privacy was safeguarded using pseudonyms.

5.2 Expert profile and narratives

The seven participants below provided insightful narratives for language experts into perceptions, experiences and expectations of the online synchronous teaching sessions. A summary of the participants is detailed in Table 5.1.

Table 5.1: Expert participants' profiles

Alias	Sex	Age	Discipline	Location	Professional status
Vivienne	F	≈65	French/German	UK	Private tutor/psychologist/
Sandra	F	≈65	English	UK	Director/private tutor
Hugh	M	≈55	English/Real Estate	UK	Senior Lecturer
Olga	F	≈45	English	Russia	Senior Lecturer/private tutor
Anastasia	F	≈35	English	Russia	Senior Lecturer/private tutor
Alex	M	≈35	English	Russia	Director/ private tutor
Kate	F	≈27	English	Russia	Private tutor/translator

For ease of reading and to personalise their stories, the following aliases for participants were chosen: R1 – Kate; R2- Vivienne; R3 – Sandra; R4- Hugh; R5- Olga, R6 – Anastasia; R7 – Alex. Participant quotes are presented in italic.

Kate (R1)

Kate is an experienced language teacher from Russia, who teaches English as a second language to non-native speakers, mainly to successful businessmen and young adult professionals, both face-to-face and online via Skype. She is an advanced IT user and feels quite comfortable teaching online. Kate teaches mainly informally and most of her clients seek to improve their language to enhance their migration prospects.

Kate thought that EA could enhance learning experience but *only if the teachers demonstrated a sincere interest in the learner and his or her interests*. Lessons should be built based on these interests. To captivate learner's attention and interest during the lesson, Kate also suggested the use of short video or audio materials, followed by a discussion of these materials and illustrating new vocabulary using her own examples. Stimulating discussions never bore students; rather they encourage them to talk and use newly acquired terms. This idea follows a very popular method of learning second languages, the Michel Thomas Method (2003), which promotes total relaxation and informality while learning foreign languages.

When ranking the EA indicators, Kate considered *trust* and *friendliness* were among the most highly rated indicators. *Passion* was also rated quite highly. *Fear* exists only where very self-conscious students are afraid of not completing certain tasks. With most informal students this indicator is insignificant. The teacher's presence was also highly rated and connected to the motivation of students. She commented that most students considered that a

tutor is more like a mentor and would not, for example, complete certain tasks without support and guidance from the tutor.

During the discussion Kate indicated that *humour* was very important factor in her lessons, and she frequently used it. Kate considered that *self-disclosure* was really a subsidiary indicator of trust, as most of Kate's students enjoyed sharing their personal life experiences with her and she managed to skilfully integrate this information into her informal lessons. Building on student's personal stories, new topics were discussed, thus *continuing thread* also emerged as an important indicator. It appeared that the only drawback of such personal discussions with a student is not to act as a personal translator, as a lot of new vocabulary starts to emerge. Ideally, the teacher must give a student an opportunity to explore and learn new vocabulary based on thematic articles and then apply this to his/her personal stories on that topic and encourage creativity in terms of usage of new words and phrases. For Kate, the experienced L2 instructor knows when to loosen structure or scaffolding.

Kate also admitted that due to her own reserved personality she does not practice *self-disclosure* herself and does not tell her students a lot about herself as a personality, her hobbies, interests, etc. This factor in turn does not always stimulate her students to share their personal preferences and ideas during the lesson, which can at times be de-motivating for students, as they feel the lack of opportunity to express their thoughts more freely. However, Kate admits that the human factor plays an important role in informal communication and is planning to change her style of conducting lessons in the future. She adds that one should understand that the role of the teacher is perceived not only as a leader but also as a personality, with his/her own interests, life experiences, etc. *Charismatic personalities will motivate students more.*

Complimenting others seemed to be not such an important factor and had no influence on the learning progress of any student. As for *using names* it appeared that the majority of Kate's students persistently avoided using her name even though she regularly called them by their names. Kate explains this by the existence of possible social barriers, possible shyness of the students and desire to keep a certain distance due to student-teacher relationship. While it was pleasant for a student to hear his own name, Kate did not seem to think that this indicator was important.

When asked why the clients prefer to have informal lessons with Kate and not formally organised group courses, Kate replied without hesitation that at group courses, individuals can maintain their acquired language, but it would be difficult to systematically construct an individually tailored programme for any particular student. Time constraints limit the opportunities to pay attention to each individual student.

It emerged during the interview that Kate's preferred method of delivery of lessons was via Skype. Kate made this decision to turn to online delivery based on the feedback she received from the majority of her students who previously had face-to face lessons. Some students, however, still considered face-to-face delivery more effective, but its effectiveness depends on the level of teacher's support, and their learning progress is directly related to how much encouragement and support they receive from their teacher.

The other important point Kate made is that the choice of method of delivering language lessons also largely depends on the aims of the students. For example, if it is just pure language learning, Skype is the ultimate choice, but if there some deeper aspects of learning involved, i.e. understanding cultural, political and social aspects of the country, and the teacher is viewed more as a consultant in these fields, then face-to-face would be preferred.

Kate stressed that tutors should motivate students by creating practical opportunities to use the language with native speakers, i.e. in language clubs, social groups, etc., where language is used in a relaxed format, i.e. *playing board games, free discussions on variety of topics, using humour*, etc. After such cultural immersion, students were more inspired to continue learning language informally via Skype. The motivated learners appreciated the fact that Kate, was not just an online language instructor, but was also someone who was interested in their personality development and sincerely interested in getting positive results. The majority of her students stated that *indifference of the teacher would be killing*. Therefore, she integrated a lot of activities into her lessons, which would be personally appealing to her students.

She considered teaching online very cost-effective and environmentally friendly:*no photocopying, no faxing, simultaneous delivery of the materials*. Of course, for any tuition session on Skype, one must be extremely well-prepared, as tuition is live in real time and the student expects timely delivery and relevance of the resources. Therefore, the teacher requires a comprehensive knowledge of the resources.

During the interview it also transpired that whether the students wish to study face-to-face or online, the most important role in motivating them was to play to their personal interests. One of the suggested motivation tools was viewing of films in accordance with the student's personal interests with the relevant language subtitles, in this case English. Dual translation or translation into the native language would only distract the student. Quite often translation of movies is also inaccurate. So, the choice of movies will depend on which topics the students are emotionally attached.

To summarise, Kate underlines the ease of her teaching online, based on *cost-effectiveness*, on *the variety of resources*, and on *time efficiency*. Internet nowadays provides

a great variety of interactive, easily accessible teaching resources with which paper-based methods can no longer compete. In addition, Kate mentioned that dealing with student's online erases certain psychological barriers and tensions, which otherwise are present *in face-to-face lessons*. Being able to conduct lessons from the environment of their own comfort zone for both students and teachers plays another role in building emotional attachment in the learning process.

Vivienne (R2)

Vivienne is a highly experienced language tutor who has taught a variety of foreign languages, including French, since 1974. She is not a very confident computer user and is new to teaching via Skype. Vivienne is also a practical psychologist and a hypnotherapist. She considers that emotional attachment plays a significant role in learning a second language. As a practical psychologist she fully realises the potential EA can bring to enhance language learning. When asked to rate the indicators of emotional attachment from 1- 5 (where 1 is the lowest), *fear* and *delighted* were given the minimum points. Questions revealed that the highest points were assigned to *trust*, *friendliness, connection, attached, passion, hope, use of humour,* and *acknowledgement of others*.

Vivienne added that being *non-judgemental and allowing the learner to make mistakes* is one of the other important factors cementing EA. Despite very broad experience of teaching languages face-to-face, Vivienne seems to be sceptical about effectiveness of online lessons delivery and considers them less productive. However, in her view the online lessons are very good for listening skills. Due to her lack of computer confidence, Vivienne struggles with her limited online teaching commitments. She considers web-based communication a medium for

social interaction for the younger generations. According to Vivienne, whether one teaches a second language online or face-to-face, *patience* is a critical factor to build EA.

Sandra (R3)

Sandra is a highly experienced language instructor with more than 25 years of teaching practice overseas and in the UK. Currently she works fulltime but also teaches online exclusively to high profile clients such as high-profile lawyers and businessmen from France. Sandra manages her own online linguistic company with 5 tutors who also teach online. For Sandra, emotional attachment plays a very significant role in teaching a second or foreign language. Sandra rated most indicators for emotional attachment as important or very important but dismissed *love* and *fear* as irrelevant.

Regularity and continuing treads, building on relevant learning materials are the key aspects to successful online learning. *Trust, friendliness and relevant professional content* were also among the other highest scored factors. She makes sure she hires highly experienced and knowledgeable tutors who can engage the students and keep them interested despite the sometimes rather dry professional topics they need to cover. She ensures that lessons are built on *personal experiences* to keep the interest of the students and continue the flow. For Sandra, *web-based communication is a medium for social interaction and a great tool to erase time and cultural barriers.*

Hugh (R4)

Hugh has more than 30 years' teaching experience, including language teaching in Japan. He has taught mainly academic English to variety of students from different countries. He

regularly has contact with overseas students, mainly Chinese and Arabic, using Skype to advise on or discuss masters or doctoral dissertation issues.

When asked whether emotional attachment affects second language learning, Hugh considered it incidental. *Indirectly, since the main factor is the expertise and the fit with students' needs. My main concern is to effectively bring to bear significant theoretical ideas on a particular topic. Although at my level academic rigor rather than student culture is really central*. Hugh took a pragmatic and elective approach to both technology and the importance of emotional attachment in lesson planning and teaching. Hugh was sceptical about the importance of EA draft framework indicators such as *delighted, love, fear*, which he considered *insignificant*. In terms of how culture influences feedback, Hugh noted some sensitivity which could influence lesson planning: *From my personal professional experience, it takes time to condition Chinese and Middle Eastern students to accept critical feedback as they can be overly sensitive to loss of face.*

Among the highest scored EA factors, Hugh named *trust, friendliness, continuing thread and passion*. In terms of preferences and acceptance of digital technologies, Hugh found that *culture* had an impact. *One can say that they usually prefer face-to-face meetings at least initially, because they need to know the person to establish trust. Most Europeans are quite happy with Skype interactions, and consider it a very convenient form of communicating.* Overall, Hugh considered that the best teaching approach involves a mix of face-to-face and online learning. *Generally, if Skype communication is used appropriately often after the face-to-face meetings, it can be quite effective.*

For Hugh, it would be fair to say that success in online teaching depends on how appropriately the educator uses it to enrich both the course and the overall online experience. Delivery of online consultations is straightforward. Although web-based communication as a

medium for social interaction is convenient for most of students, the majority still prefer face-to-face communication.

Olga (R5)

Olga is an Associate Professor at a Department of English in a foreign languages institute in Russia. She has more than 20 years of teaching experience. She is highly computer competent and conducts her lessons four times a week mainly with university students and young professionals. In her view, emotional attachment affects second language learning to a great extent. Among the lowest scored factor for EA Olga named *fear, love* and *hope.* Olga considered *self-affirmation* another important aspect of EA, which often corresponds to her learners' needs and can be tracked by the progress of the learners. When asked to describe a web-based communication as a medium for social interaction, Olga suggested that: *Web-based communication is increasingly getting more and more frequent in all spheres of life as it is real-time communication and available and affordable means of interaction. It seems to me that it has very powerful potential which will be realised soon, including the possibilities for online education.* Among the highest scored EA factors Olga named *trust, friendliness, continuing thread, passion, complimenting others, humour, acknowledgement of others.*

Anastasia (R6)

Anastasia from Russia is a Skype lecturer as well as a university lecturer in Management and Economics who has 17 years' teaching experience. She considers herself highly computer literate and has been delivering lessons via Skype for 5 years now, normally about 3 times a week. Her main clientele is young adults.

In Anastasia's words, EA plays an important role in language learning. *Affection* is very important, as part of initial stage of building relationship with the student. Certainly, *friendliness* scores high as well, as it's important to keep friendly relationship between a teacher and a student. Anastasia considers that *connection* also plays a significant role in establishing rapport with students, and she has several students who are long-term students studying for over two years via Skype. *Passion* is quite a strong term to use for describing learning process via Skype but being *delighted* with a task or lesson is more suitable in Anastasia's words. *Trust is critically important as without it there's will be no proper relationship. Love* for language learning is certainly important but should not be applied to the student-teacher relationship of course. As for *fear*, Skype accommodates students to stay in their comfort zone, and therefore reduces fear as students can avoid feeling any fear by switching off the camera, by postponing doing certain exercises until later, reducing stress and fear. *Hope* is important in any activity, especially in learning, as everyone needs to see the light at the end of the tunnel.

As for emotions, Anastasia uses all types of emotions during her lessons otherwise the material presented would be too dry. *Humour,* if it is a good humour and appropriate for the topic is always important in lessons. *Self-disclosure* in her words is part of the *trust* relationship and sometimes she integrates that in her lessons, but if a person prefers not to disclose any personal information when discussing topics like family, friends etc. then this of course should be respected.

For Anastasia, continuing a thread is extremely important. It is crucially important to logically build up on the material, logical sequence of activities which have already been covered. However, for Anastasia, scaffolding needs to be progressively removed as student confidence increases. *Complementing others* encourages students, although it should appear natural. *Names* are important to personalise the lessons. Asking questions is important to

confirm understanding of the students and show that you are not indifferent to their learning. Expressing appreciation for work which has been done by students is important, but false compliments or too many compliments are ineffective. One should bear in mind a focus on teaching individuals rather than groups. Other factors which are important for EA are a variety of media texts, authentic materials and to keep a certain pace of the lesson appropriate for each learner. All lessons are individually tailored to student's needs. Informal learning is effective as it economises resources in all aspects, and Skype enables flexibility. As for the ease of delivery of informal lessons, since most other students are young individuals, they are used to using technology and they enjoy it.

Alex (R7)

Alex is an online course developer**,** successful online language school founder, and has been in business for over five years. He regularly conducts professional webinars mainly for Russian young professionals who are interested in learning English online informally. For Alex, EA is not as important as technological and pragmatic considerations. For Alex rather than the duration of the classes EA can only really develop with regular and frequent online study. To develop student attachment, Alex recommends short systematic lessons of no more than 15 minutes a day which build on concepts of previous material. This approach is far more effective than lengthy irregular sessions. Alex stressed the importance of *Affection, Connection, Humour and Flow* but disregarded *Fear*. For him, f*ear usually exists with the use of textbooks*, but this should be avoided in the Skype learning process. To engender EA, teachers need to *somehow communicate love and passion to their students. The quality of sound in the online process is very important, as here the focus on listening is extremely important.*

Teaching via Skype without a camera being switched on, prepares students better for real life situations, where they must be more articulate to get the message across. Online education is quite effective as it enables deeper understanding of the student and his/her behaviour. *The use of associative memory which particularly can be applied to certain students enhances learning and understanding immensely*. Alex advised that teachers concentrate on limited number of *new words, maximum 7-8, to prevent information overload.* Repetitive patterns and integrating humour skilfully into the lesson can also improve learning outcomes.

5. 3 Analysis

The seven expert interviews provided useful insights into the role of EA, its various constituents, factors and pragmatic online L2 pedagogy. Several pedagogical themes emerged. Most obvious was the need to nurture students, *fit students' needs* and facilitate learning environment, so they are not afraid to make mistakes. *Patience* was named as one of the critical factors to facilitate learning environment. One of the needs of students is for L2 lessons to bridge both the student's own culture and that of the target language. For example, Hugh noted that*, it takes time to condition Chinese and Middle Eastern students to accept critical feedback.* The experts also agreed importance of scaffolding*,* particularly during early L2 acquisition phase. However, L2 scaffolding should be removed at the earliest opportunity (*continuing thread, building on relevant learning materials*)*.* Frequent and regular contact is advised to check for understanding (*asking students questions to confirm understanding*; *frequency and regularity*).

In the experts' view EA enhances L2 learning experience, provided it is well-calibrated and several critical motivational factors are taken into consideration, such as *trust,*

friendliness, *connection*, *building relationship, teacher's presence, humour, passion, continuing thread, attached, self-affirmation.* However, the experts were sceptical about *delighted, fear, love, giving compliments, hope* and therefore these were removed from final framework.

Other important factors for emotional attachment which emerged during the interviews with experts included practical usage, charismatic teachers' personality, patience, fit with students' needs (tuning, listening to students), self-realisation, variety of media materials, frequency of lessons (rather than duration); and associative memory.

Overall, it is clear that not all experts agree on the relative importance of some constituents of EA. Broadly, both the expert interviews and the learners' survey suggest that such factors as *Affection, Love, Passion, and Fear* play a negligible role in engendering EA and are therefore not significant factors for instructors to consider when designing lessons for synchronous informal learning. The combined analysis of the experts' and learner's views greatly enriched EA-ISOLL understanding and improved the validated framework.

5.4 Embedded reflections

My own personal reflections on decades of instruction at universities, in secondary schools and online suggests to me that EA is a supportive/nurturing as opposed to structured or leadership dimension to teaching. As my own practice showed *passion* alone is not enough to create an attachment, a passionate teacher without deep knowledge and understanding of the subject and without a sound pedagogical structure and approach is unlikely to be appreciated by students. Complimenting students excessively can create a wrong impression of achievement and doesn't add any benefit to learning progression.

One of the most important aspects of EA in my view is firstly establishing *trust* and building relationship with students, showing genuine interest in learner's progression, by providing continuous feedback and well-structured lessons, which facilitate *flow* and motivation. I have also experienced that students from different cultural backgrounds have different learning needs and sometimes the content of the taught target language should be adapted accordingly. At the same time, to provoke learning appetite for a foreign language it is important to immerse the students in the culture of the target language.

My own language teaching experience suggests that beyond the necessary technological platforms and applications, instructors need to tune into student needs and engage them online in accessible and culturally relevant interactive discourse or collaborative tasks that engender participatory L2 dialogue. To relate at this emotional level and craft an effective L2 pedagogy, ISOLL instructors must master target language but adapt online lessons to student diversity, learning constraints, and socio-cultural milieu.

Overall, my own extensive online and other teaching experiences broadly chime with the survey results and experts' views on EA, its role for effective informal online L2 learning and pedagogy. Table 5.2 below presents a summary of the experts' contributions and overview of their professional profiles.

Table 5.2: Expert Interview Summary

Expert profiles and answers on factors for Emotional attachment in second language learning

	R1	R2	R3	R4	R5	R6	R7
Teaching experience	more than 5 years, ESL tutor, Russia	more than 20 years, mainly face-to-face; linguist, practical psychologist and a hypnotherapist, UK	more than 25 years, language instructor, director of online language school teaches exclusively online high-profile clients, UK	more than 30 years, senior lecturer at the UK university	more than 20 years; associate professor at the department of English Russia	more than 17 years, with more than 5 years online, English ESL lecturer Russia	more than 20 years online school founder Russia
Factors with limited influence on EA	*complimenting, love, fear, calling by names*	*fear, delighted, love*	*fear, love*	*delighted, love, fear*	*love, fear, hope*	*passion, love, fear*	*fear* (of textbooks); *love* and *passion* to subject should come more from the teacher
Factors with strong influence on EA	*humour, trust, continuing thread*	*trust, friendliness, connection, attached, passion, hope, humour, acknowledgement of others*	*trust, friendliness*	*trust, friendliness, continuing thread, passion.*	*trust, friendliness, continuing thread, passion, complimenting others, humour, acknowledgement of others*	*connection, trust, friendliness, humour, acknowledgement of others*	*connection, humour affection, connection, and flow*
Other important factors for EA	*exposure to native speakers*; *charismatic teacher's personality*	*being non-judgemental and allowing the learner to make mistakes, patience*	*ability of teacher to listen and tune to student's needs, relevant professional content*	*expertise and the fit with students' needs*	*self-affirmation and self-realisation*	*variety of media texts, authentic materials and keeping a certain pace of the lesson appropriate for each learner*	*frequency rather than duration; use of associative memory the quality of sound, and a focus on listening is extremely important*

5.5 Chapter summary

The fifth chapter analysed the results of interviews with seven experts who were experienced L2 instructors with generally more than 10 years general and > 2 years online SLA teaching experience. All, except for Vivienne, were advanced and confident computer users. In terms of frequency of lessons, the majority teach up to 10-15 hours per week. All respondents expressed their view on the role of EA in second language learning as critical or extremely important. Both Kate and Anastasia considered self-disclosure as an indicator of *trust*. Kate related that most of her students enjoyed sharing their personal life experiences with her and she wove these narratives into her informal lessons.

Most interviewees considered the EA putative constituents in the draft explanatory framework (Affection, Connection, TP, SP, and Flow) important. In a three-tiered SLA conceptualisation (Fir Group, 2016), found it was important for L2 instructors to engage students by supporting autonomy (Jang et al., 2010) and putting their beliefs, behavioural conventions and basic assumptions at the centre of culturally-relevant lessons (Ishihara & Cohen, 2014). These conclusions align with Swain (2019) notion of *languaging* as an overarching framework for L2 (process) and her focus on collaborative dialogue to complete linguistic tasks. The expert interviews also highlighted the importance of properly calibrated L2 scaffolding.

The next study chapter synthesises Chapter 4 and 5 results and draws together evidence from all three sources (literature, survey and interviews) alighted to the research objectives and provides a complete answer to the research question. Chapter 6 also presents the final validated EA-ISOLL framework.

Chapter 6 Discussion

6.1 Overview

The sixth chapter discusses research findings in the light of the literature to help establish the role of emotional attachment (EA) in Informal Synchronous Online Language Learning (ISOLL) and to answer the question: *What is emotional attachment and how does it enhance second language learning in informal synchronous online learning contexts?* The structured discussion in Chapter 6 reflects on the research findings with a view to answering this question and achieving the main research question (RO1) and several subsidiary objectives. RO2 involved defining EA in the learning context that I achieved by reviewing a range of psychological, business and learning literature. As well as helping define EA-ISOLL, the review of the body of knowledge helped generate a draft explanatory framework to structure subsequent investigations. RO3 was to investigate the influence of EA on L2 learning in different informal online contexts (EA-ISOLL) which involved external empirical research (survey and expert interviews). RO4 sought to identify the main constituents of EA while the final objective RO5 was to articulate its pedagogical implications. Here, I considered its primary results in the light of the literature bridging any previously identified gaps in knowledge concerning EA-ISOLL. In the final chapter validated EA framework and reflections provides a complete answer for the role of EA-ISOLL in diverse informal settings.

6.2 Discussion of survey findings

The survey was analysed descriptively, graphically (4.2) and statistically (4.3). These various analyses generated some mixed results. For the descriptive and graphical analysis, the research

identified factors which 50% of respondents rated either as “very important” or “critical”. Following Leek, McShane, Gelman, Colquhoun, Nuijten, & Goodman, (2017) and Patton (1999) this simple statistical approach is perfectly acceptable because analysis does not preclude “any single methodological approach” (p.1190).

Under a pragmatic research paradigm, the research needed to distil the key aspects of EA without missing significant features or introducing bias. Although formal statistical decision rules often invoke a statistically significant threshold (*p* value or similar metric) which is usually set at 5% or 1%, the heterogeneity of synchronous informal learning circumstances invalidates the statistical assumptions underpinning such techniques. The research considered simple percentages a more useful EA factor for cut off criteria, subsequently validated during the interviews which confirmed that the eliminated EA considerations were unimportant.

Marginal factors

The online survey suggested that language instructors operating in synchronous online environments can ignore considerations of love, fear, acknowledgement of others by compliments. Group cohesion/reference via salutations, vocatives or inclusivity can be ignored in lesson preparation and delivery as well. Thomson et al., (2005) found that Affection; Passion and Connection were valid first-order EA factors related to, but statistically distinct from, satisfaction, involvement or brand attitude. As in marketing, trust is an important constituent of EA within “Connection” (Morgan & Hunt, 1994; Garbarino and Johnson, 1999). Most survey respondents dismissed some EA factors like excessive compliments, superficial agreement, needless self-disclosure or threats and fear. Respondents were also sceptical of platitudes like love or artificial attempts to instil group cohesion or foster inclusivity via greetings, group reference or vocatives. For example, only around one third of respondents thought love a critical

or very important factor in inciting EA. The relative unimportance of group cohesion, whether generated by greetings or vocatives, is somewhat puzzling in the light of Anderson et al. (2001) who stressed the importance of social factors but may be explained because most informal online language lessons are conducted one to one.

Affection

In contrast, 60% of respondents rated Affection as either very important or critical (Figure 4.8). Statistically, this concurs with marketing insights (Grisaffe & Nguyen, 2011; Oliver, 1999) that a combination of personal memories, sentimentality, social conditioning, marketing and product-related characteristics generates emotional attachment and brand loyalty. One respondent (R94), considered that, online, Affection could be generated by empathetic understanding and great performance in terms of audio-visual presence because, as R23 explained, *no matter how educated teacher is, it's important who he [or she] is as a person.*

Friendliness and student support

Friendliness obviously helps generate feelings of affection, as over 80% of respondents considered it either critical or very important. In terms of pedagogic practice, students considered instructors friendly if they were respectful, warm and showed some genuine interest in students' lives, hobbies, and motives. In short, to be considered friendly, instructors need to be empathetic, which in turn impels them to build some sort of connection with their students. In fact, almost 70% of students rated connection as either very important or critical. According to the respondents, instructors can build connections with their students through real life chat or teaching original topics which are relevant to students' interests. To connect intimately and professionally with students, a prerequisite is to learn more about them. However, around 55% of respondents considered that using student names promoted EA, as did the acknowledgement

of others via agreement or disagreement because it cultivates [a] positive environment (R194). The use of names helps to focus sessions, encourage attentive listening and direct student performance feedback.

Attachment

Attachment is very similar to connection but has longer term associations. Just over half (51.16%) the survey respondents rated it as critical or very important. To keep students attached, instructors need to, first, identify idiosyncratic interests, second, to embed the realities of students' own lives in lessons and, finally, to juggle a flexible range of learning approaches geared around these interests but aligned to broader and longer-term programme or module objectives.

Students needs

The online survey validated questioning (66% considered important or very important) because it challenges students and so maintains interest and encourages independent critical thought. For learners, excessive compliments were disparaged but it is important for LX instructors to tune into students' needs and interests helps build common ground (R103). Obviously, instructors then need to weave the resulting student profile into their lessons whilst remaining friendly, concerned, available and interested (R50). This reflected Vygotsky (1962), Cole (1962), Chomsky (2000) and more recent authors like Lock & Redmond (2019) who stressed the need for understanding and building culturally sensitive but professional learning attachment with students.

Passion

According to Wood (1893), Pythagoras (570-496 BC) is supposed to have railed against unfocused and ill-considered passion. The findings indicate that Passion is a problematic

constituent for EA-ISOLL that only plays a supplementary and contingent role. Passion echoes its contested role in both marketing and learning literatures. In marketing Grisaffe and Nguyen (2011), suggested that product satisfaction and perceived value are necessary but insufficient for passionate brand attachment. In learning, I concurred with Hargreaves (2000) that properly directed and contextualised, Passion can help improve student learning environments. Hargreaves (2000) considered that teachers are emotional practitioners who can make classrooms exciting or dull. Informal online language instructors therefore need to be passionate. Over 56% of survey respondents considered Passion a seminal emotional driver (as indicated by Passionate or Delighted questions (*Figure 4.10*). Passion requires enthusiasm and ignites curiosity or a desire to learn new things. To achieve enthusiasm in students R73 stated that instructors need to be positive and *always smile.* Taken to extremes however, Passion can become *an obsession and even an addiction to internet* (R94). For students to take delight in lessons, (rated by just over half as an important or very important EA factor) as well as identifying and harnessing common grounds or shared interests and similar life situations with students, teachers need to reveal some of their personality. However, these revelations, to evoke delight, need not necessarily be deep or detailed, *but critical points really do help!* (R103).

Trust

Beyond, "tricks of the trade" as it were, the survey identified that trust (Castelfranchi, 2010) is one of the key EA drivers, rated as important by over three quarters of respondents. This concurs with marketing literature which puts trust at the core of relationships in communities of mutual interest (Morgan & Hunt, 1994). To build a strong emotional anchor, students need to *feel emotionally comfortable* (R25). Part of this emotional comfort is linked to solidarity with student interests, but kindness is another key underpinning of trust. Ironically, whilst respondents

did not consider that relationships were decisive in fostering EA, they did appreciate dedicated and conscientious instructors with a *strong work ethic* (R177). This respondent even considered that EA in an online course could be pragmatically demonstrated by student conscientiousness. The instructor-student relationship is one of *a critical friend* where the instructor, *acts naturally* (R86).

Hope

Part of the job of a critical friend is to inspire hope (rated by around 63%) as an important EA driver. Clear lesson objectives and constant positive student performance feedback certainly helps but this needs to be enriched with emotions (almost 65% this considered important or very important). At the risk of providing too much detail, to engender a positive emotional lesson, instructors must be knowledgeable and consider students' interests but also smile, be patient, honest and above all be sincere. R186 helpfully provided German equivalents to those terms: *Wissen* (knowledge), *Geduld* (patience), *Ehrlichkeit* (honesty), *Vertrauen* (trust), *Positivismus* (positivism) and *Ernsthaftigkeit* (sincerity).

Flow

The online survey confirmed the findings of Csikszentimihalyi (1991) that lesson Flow is a critical factor engendering positive emotions, engagement and improving learning. Just over half thought *continuing a thread* by maintaining interesting conversations was decisive. Instructors need to build up lesson momentum or extend topics rather than switching or jumping around. Lesson flow requires interesting topics which are extended via discussions, providing test feedback or by introducing topic-related but visually stimulating materials or games. Flow can be disrupted by unnecessary compliments or excessive praise (Didau, 2016; Dweck, 2006). Instead of superficial praise, instructors need to situate themselves in the cultural context and identify

idiosyncratic student interests or embed realities relating to the student's own life in their lessons. The instructor must be flexible and use a range of learning approaches geared to these interests. Informal online language instructors need to juggle student interests with varying pedagogical approaches.

Engagement

An NVivo analysis generated a qualitative word count from the survey and the results were compared to an interview word count to see if any material differences emerged. The analysis of the survey identified *learning*, *online*, *interesting* as key words as well expected ones like *student* (or *student*s) and *teacher* (see Chapter 4). For the experts, "learning" featured less obviously but "emotional" was more dominant in the survey, which suggested that instructors placed more emphasis on engaging emotionally with students while the students were concerned about learning, and perhaps their position among social peers and interesting lessons. In Kate's words, *encouragement and support they receive from their teacher, choice of method of delivery of language lessons largely depends on the aims of the students.*

Technology

Unsurprisingly, the survey also found that confidence in technology strongly impacts on ISOLL success which resonated with Compeau, Higgins, and Huff, (1999). In line with McCarthy and Wright (2006), the survey indicated that ISOLL progression is influenced by many factors, including technological exposure or enchantment. Notwithstanding Maria Montessori (1909), for ISOLL the survey and expert interview suggested the online backdrop such as aesthetics and surroundings are not a major influence on EA. Anecdotally, however, according to (R73), L2 instructors project a positive image to build emotional engagement and learning. The open-ended survey questions also suggested that student engagement increases

when first presented with emotionally charged and culturally embedded visual cues which reflects what Goswami and Ziegler (2006) found when studying the neurobiology of child development.

Emotions

Responses to the open-ended survey questions indicate that EA means very different things to students from diverse cultures and languages and EA is often misinterpreted (R114). Paradoxically, emotions can both "motivate but also distract students", according to (R177) who would rather have, "more opportunities to speak and express own viewpoints", Over three quarters of respondents were convinced that humour fostered emotions because it made lessons more fun and was often linked to fun activities and games. Part of *Ehrlichkeit* or honesty involves *self-disclosure* but this facet of teaching was not considered decisive (only around 43% rating it important).

Attachment

Students became attached to L2/LX instructors or online lessons for many reasons, including honesty, discipline, openness and toleration of contrarian perspectives but also informative, up-to-date lessons, tailored to personal circumstances. Clearly, attachment to LX online sessions is complex and involves multiple factors that vary across diverse student cohorts.

EA

Almost two thirds of survey respondents considered that EA influenced second language learning (see Chapter 4, Fig 4.5). 65% rated EA's role as either critical or very important. However, the CoI framework (Garrison & Arbaugh, 2007; Rienties & Rivers, 2014) suggested that EA is unlikely to operate in isolation from instructor competence, independence and student support. The closed-ended responses to survey questions confirmed that whilst passion can

evoke student emotions, it is a supporting rather than a critical driver of ISOLL success. Some respondents recognised the beneficial role EA played in online synchronous learning. However, others thought that EA played a relatively minor role in learning enhancement. Thematic analysis of open-ended survey questions (Braun & Clarke, 2006) confirmed the mixed views. Some respondents considered that, without EA study was impossible. This echoed research of Artino (2012) who found that interpersonal relationships and group or place attachments help to focus student cognitive energies on learning tasks.

Statistics

The statistical results gave a mixed picture overall and suggested that covariates were acting in a complex fashion to mask the subtleties of EA and learning interactions. A discrepancy emerged between graphical and discursive analysis in Stage I (s4.2) on the one hand and statistical analysis of Passion on the other. The former suggested it might be important (*Figure 4.10*), but regressions in Stage II statistical analysis (s4.3) found it insignificant, although there were limitations with the non-hierarchical OLS techniques, as noted in Chapter 4 earlier. This paradox reflects wider contention around nomothetic or idiosyncratic research approaches. Notwithstanding its limitations, overall, the survey suggested that learning context and EA are likely to influence learning.

My findings reinforce studies by authors such as Lock and Redmond (2019) that there are a range of learners out there with diverse learning needs so the success of engendering EA-ISOLL depends on understanding student socio-cultural and educational needs but also the degree to which other learning supports are in place in the community of learning (Hattie, 2008).

6.3 Discussion of expert interviewees

The language experts interviewed had more than 10 years teaching experience and > 2 years of online L2 teaching. All, except for Vivienne, were advanced and confident computer users. However, with the benefit of hindsight and reading Bettez (2015), I would have taken more care to select participants from a more diverse backgrounds and positionalities to engender multiplicities of gender and ethical assemblages or a "meshwork" of potentially conflicting viewpoints on EA and allow for, "productive discussion … to address some of the material issues that arise around social identity and oppression" (Hames-Garcia, 2011, p. 8). For this study, I used convenience sampling with quite pragmatic criteria as indicated above. My interviewees each taught ESL or L2 online up to 10-15 hours per week.

For the expert interviews, the focus was on terms like "students" with emphasis on the "important" [aspects of learning] and "language". All respondents expressed their view on the role of EA in second language learning as critical or extremely important. Several factors are clearly involved in eliciting EA in ISOLL contexts, including charismatic personality of the teacher. Kate, for example, considered that *charismatic personalities will motivate students more.* Interesting interactive lessons, regular follow-up with students, mutual understanding or basically compelling yet structured and scaffolded sessions are all important motivational factors in experts' view. The experts confirmed the general importance of EA but held a range of views on the importance or irrelevance of various EA constituents. Notwithstanding Anastasia's view of the importance of Affection, this aspect of EA was not mentioned by any of the other experts and neither did it feature prominently in the online survey. *Friendliness*, however, was identified by several experts and most of the survey respondents as a significant aspect of EA (see Table

4.2) and obviously plays some role in learning progression but whether it can be considered an EA-ISOLL constituent or merely a supporting factor remains, at this stage, unresolved.

Kate and Anastasia's interviews indicated that that self-disclosure helped build trust, as most Kate's students enjoyed sharing their personal life experiences with her and she managed to skilfully integrate this in her informal lessons. Other important EA enhancements that emerged during the interviews with experts were practical and socio culturally situated learning that echoed, for example, aspects of Sanders and McCutcheon (1986). Nowadays, instructors are expected to have functional technological capabilities in online learning or media platforms like Zoom or Padlet to facilitate lessons that appeal to student online habits and expectations, and facilitate the more fluid, if not casualised, modern labour market and changing social habits. The research found that charismatic teachers' personalities needed to be directed to foster student engagement and reflected widely acknowledged findings of Hattie (2008, 2012), who stressed the importance of teacher progress visibility and trust for student engagement. Charismatic teachers use associative memory to establish connections between student memories and new language constructs (Tennyson & Cocchiarella, 1986). Instructors need patiently align L2/LX learning activities with student needs and interests, ascertained by sustained dialogues.

Interestingly, both the expert interviews and the learners' survey suggested that such factors as *Love, Passion, and Fear* play a negligible role in engendering EA-ISOLL and are therefore not significant factors for instructors to consider when designing lessons for synchronous informal learning. For example, Sandra, rated most indicators for emotional attachment from 4-5, but dismissed love and fear as *irrelevant*. This seems to run counter to Bowlby's (1973) notion of *anxious attachment*. Excessive nurturing and poorly attuned EA are counterproductive and can aggravate anxiety in some students (Wubbels, Brekelmans, den Brok, & Van Tartwijk 2006;

Didau & Rose, 2016). Expert interviews confirmed the view that EA and meta-linguistic awareness enhance online learning (Cleveland-Innes & Campbell, 2012). All seven experts considered EA an important contributor to online learning enhancement. Kate, for example, suggests that *EA can enhance learning experience but only if the teachers demonstrate a sincere interest in the learner and his or her interests*. Her views concur with those of Damasio (2003) that learning is conditioned by emotional context. For the experts, ISOLL pedagogy without emotions is depleted and leaves students ill-equipped to tackle real-world situations outside the webinar or Skype video link.

However, the interviewees, commenting on online learning environments, concurred with Andersons et al., (2001) that, social and content-related interactions among participants improve the online learning experience. However, resonating with Yuan & Kim (2014), TP facilitates fruitful interactions for ISOLL so that online LX interactions are well- designed and aligned with student evolving learning goals. Experts agreed that directed, culturally relevant and personally meaningful social interactions can foster EA and learning but as Hugh, in the interviews, noted *the main factor is the expertise and the fit with students' needs*.

The experts all agreed that compelling online language lessons involve several factors. Engagement drivers include mutual understanding, charismatic personality of the teacher, interesting interactive lessons and regular follow-up. Kate for example, suggested that EA can enhance learning experience when *stimulating discussions are used which never bore students and encourage them to talk and use newly acquired terms*. She also stressed that *tutors should motivate students by creating practical opportunities to use the language with native speakers, i.e. in language clubs, social groups, etc., where language is used in a relaxed format, i.e. playing board games, free discussions on variety of topics, using humour, etc.* These cultural

immersion views, where students feel more inspired to continue learning language informally are also supported by Tomasello, Carpenter, Call, Behne, and Moll (2005). They found that learning flourishes in a rich cultural setting where groups develop idiosyncratic symbols and problem-solving approaches. For Hugh, however, EA must *coincide with students' needs*. For successful ISOLL where group-work is problematic, instructors should develop tasks which embed logical reasoning and technical skills to solve *real-world*, culturally embedded problems.

As well as embedding lessons in everyday foreign life and culture (Moore, 2004; Thanasoulas, 2001), instructors should engage students by regularity. Sandra confirmed that *regularity and continuing thread, building on relevant learning materials* helps with successful online learning. Alex advised that *EA can only really develop with regular and frequent online study*. Other experts' learning advice included: self-affirmation and self-realisation; using a variety of media texts and authentic materials and maintain appropriate lesson pace, listening to and providing students with feedback. To reinforce associative memory, instructors must use newly introduced language frequently. Above all, in the linguistic sphere, instructors need to design culturally relevant lessons and build trust by repeated positive engagements. The research clarified the meaning of EA (RO2) for learning with accelerating technological change where instructors need to continuously adapt (Huitt 2007) but still maintain the emotional engagement with diverse student cohorts. To maintain inclusivity, it is critical for instructors to assess their student's needs and adapt lessons to ensure that material is accessible, culturally relevant and scaffolded for engagement.

The final constituents of the refined and validated EA framework emerged from the connection between the literature-generated draft frameworks and subsequent investigations of ISOLL learners, practitioners and experts. The literature generated a host of putative EA factors,

but the sequential empirical investigations (survey, interviews and my own embedded teaching reflections) progressively whittled down the EA-ISOLL constituents until the final, validated framework (see Table 6.12 and Figure 7.1).

6.4 Discussion of research questions and subsidiary objectives

I answered my thesis' main research question, about emotional attachment and its role in language learning in informal synchronous online learning contexts. I found that EA-ISOLL is a positive psychological attachment to an instructor or course that helps nurture L2 engagement and learning by strengthening Emotional Presence and interactions for Emotional Intelligence or *languaging* but, more importantly, by catalysing internal cognitive transformation to embed new linguistic syntax, anchor a lexical corpus or illuminate semiotics. It is fostered by sustained, culturally meaningful and appropriate interactions between instructors and language students. To enhance learning, EA needs to calibrate its nurturing within a structured course/programme or module. In answering the main RQ and reaching its first objective, I achieved its four other ones (RO2-RO5), each of which are now discussed in more detail.

6.4.1 Objective 2 – EA-ISOLL definition

The second objective was to define EA relevant to the context of ISOLL. To decide on a pragmatic EA-ISOLL definition, three main strands of literature were reviewed and compared to online survey results and expert interviews.

The EA notion first surfaces in the child development and psychology literature (Bowlby, 1969). Ainsworth (1978) and her colleagues noted the spectrum of attachment typologies,

including anxious attachment that alerted me to the need for calibration of the nurturing dimension to teaching and its balance with appropriate structure. EA is thus a psychological state and learning is fostered by sustained and meaningful interactions, involving several constituents. For Bowlby (1973), trust is central to engagement and teaching competence. in the marketing literature where it is related to loyalty and helps generate brand value, but consumers usually only become emotionally attached or committed to a brand if satisfies them and they trust it (Garbarino & Johnson, 1999). The business and marketing literature suggested that EA is intense and enduring beyond a positive brand attitude (Mitchell & Olson's, 1981). The open-ended survey responses and interviews intimated that EA-ISOLL is a motivational bond of affection which evokes feelings of connection, affection and passion but not necessarily love that concurs with the literature (Aron & Westbay, 1996; Feeney & Noller, 1996). The primary evidence also intimates, echoing Etzioni (1961), that EA-ISOLL thrives in a moral or empathetic rather than a coercive or instrumental teaching ambience.

The learning literature suggested that EA-ISOLL enhances lessons because, without it, some needy students can feel anxiety or insecurity, despair or depression (Gillath et al., 2016). In learning, EA is a state where students, who trust the teacher and feel they belong, are motivated to engage in productive learning. Damasio and other scientists (1994, 2003) have physiologically demonstrated with brain scans the critical role of emotions on high-level cognitive skills e.g. reasoning, decision making, language, reading, and mathematics. They suggested that emotional sensitivity enhances evolutionary survival. EA-ISOLL is internal with intense, episodic and more enduring mood impacts (Linnenbrink & Pintrich 2002). To generate the necessary sense of belonging or bonding for EA (Baumeister & Leary, 1995), instructors need to design L2 sessions with an inclusive mindset that considers diverse student needs and cultures (Lock &

Redmond, 2019) to motivate students to care about their learning (Bowlby, 1973; Libbey, 2004; Blum, 2005). Pragmatically, effective EA-ISOLL is operationalised using appropriate scaffolding for engagement and attentiveness or learning flow (Bardack & Obradović, 2019; Csikszentimihalyi,1991; Such, 2019; Van Velzen et al., 2019).

Experts in Chapter 5 noted the importance of adjusting lessons to individual needs. Clearly, cognition and emotion are interconnected aspects of human functioning. Adolphs, Tranel, Damasio & Damasio (1994) found that when emotional, social or cultural meanings are stripped from interactions, attention, memory, decision making, motivation, social functioning and learning are all diminished. I confirmed this finding and found that 69% of respondents rated Connection very important or critical (Chapter 4). To be effective, competent instructors need to activate emotional "triggers", either real or imagined, to help students focus. Anastasia, one of the Chapter 5 experts, noted, that instructors can emotionally connect with students by continuing a thread, so lesson activities are logically sequenced.

With reference to the business EA literature, my findings were distinct but there were echoes. For example, perhaps stretching metaphors somewhat, one could say that, just as EA, predicts brand loyalty and price premiums in business (Thomson, MacInnis and Whan Park 2005), so too it influences student motivation and engagement (Dörnyei 2020; Mercer & Dörnyei 2020). In business and in L2 learning (Swain 2019), collaboration and co-construction facilitate task completion or are themselves the real substantive goal (e.g. when forming business or learning teams). As with business corporate culture, I found that for informal synchronous learning, language culture and social interactions are critical for cognition, motivation and engagement (Vygotsky 1994). My L2 findings that judicious emotional nurturing complements learning design/structure for engagement aligns with Etzioni's (1961) ideas on the importance of the

alignment of power modes and emotional status align in coercive-alienative; utilitarian-calculative or normative-moral power duos. I also noted that EA, like EP is underpinned by EI that plays a constructive role in conflict management, important to complex learning and business project success (Majeski, Stover & Valais 2018).

As with Thomson, MacInnis & Park, 2005, I found that EA is a multidimensional notion with underlying constituents, including Affection and Connection, although, in my EA-ISOLL framework, Passion is only ancillary. My interviews accord with the increasing awareness of the importance of socialisation within firms and the role of leadership. For the openness aspect of Social Presence, survey found almost 80% of respondents were comforted somewhat agree or agree by an authentic TP.

I also noted that EA helps cement flow or periods of concentration when learners are engaged in optimal performance. For example, Sandra found that lessons built on *personal experiences* can help keep students' interest and continue the flow. This confirms the idea suggested by Csikszentimihalyi (1991), that flow stretches the mind to its limits "in a voluntary effort to accomplish something difficult [but] worthwhile" (p.3).

I confirmed the literature that EA is a complex and contentious notion, but respondents or interviewees provided insights into its crucial aspects. Survey respondents confirmed the literature that we are fundamentally emotional and social creatures (Adolphs et al*.,* 1994) and emotions influence development and learning. As R114 noted, *building a sense of community is vital.* Rather than definitions, experts stressed pragmatic praxis relating to EA such as the importance of teachers who were non-judgemental who allowed learners to make mistakes. Qualities which helped instructors to foster EA in synchronous online settings included patience, listening but above all tuning in to student's needs. However, as well as emotions, instructors

needed technical linguistic and teaching expertise. The literature, survey and interviews revealed a range of nuanced interpretations for EA, but all three strands suggest that, first, EA has a significant impact on learning and, second, that it has multiple constituents. So, based on the findings from the literature, survey and experts, I defined EA-ISOLL as a calibrated motivational bond between learners, instructors, and the course. In a properly structured learning framework, EA nurtures learning by harnessing the cultural milieu, so learners feel secure and confident.

6.4.2 Objective 3 - Influence of EA-ISOLL

The third objective of the research was to investigate the impact of EA on ISOLL. The research found mixed evidence for the significance of EA for successful online language learning. While, survey answers to Q10 (on whether EA affected second language learning) were overwhelmingly positive with almost two thirds (73.45%) agreeing at least strongly (see Figures 4.6) my statistical analysis was not so convincing. The reason is that EA does not operate in isolation but via EP and its role varies over student learning journey. For EA to impact positively on student learning, instructors need to embed it in a student's culture. In effect, instructors need to learn from and with the student (Lock & Redmond, 2019). EA-ISOLL is built by acknowledging and harnessing students' prior knowledge to craft concrete, culturally, cognitively and socially relevant tasks. On the issue of EA influence on ISOLL (RO3) then I reflected Anderson et al. (2001) Community of Inquiry (CoI) framework that social interactions, cognitive and teaching presence support learning. For ISOLL, instructors must project themselves socially to build authentic and professional and emotional bonds or real relationships with students. As interviewee Hugh, pointed out, *EA plays a significant part in learning in cases where it coincides with students' needs*. His point is confirmed by Rienties and Rivers (2014)

who underlined the key role of emotions in learning and found that Social Presence involves purposeful educational communication.

In accord with these authors, I found that Cognitive Presence (CP) is built as students rotate through a cycle of practical inquiry from problem understanding to exploration, integration and, finally, application. The expert interviewees agreed that real world application is crucial and can be undermined by contrived settings, technical glitches or lack of presence, bumbled facilitation or weak direction. For Alex, *EA can only really develop with regular and frequent online study*, which agrees with the view of Wright et al., (2013) who confirmed the importance of emotional dynamics for online learning and identified rapport-building teaching traits. To conclude, for RO3, I found mixed evidence that EA influences learning. While, the survey descriptive and graphical analysis (Stage I), the expert interviews and my own L2/LX embedded reflections (s5.4) suggests a role, EA proved statistical insignificant. Interestingly, this finding illustrated the limitation of nomothetic research because, the statistical aggregates mask the need for EA-ISOLL to be finely calibrated so that its nurturing does not lead to anxious attachments that could undermine learning.

6.4.3 Objective 4 - EA constituents and factors

To identify the constituents of EA, the research adopted an explanatory approach and generated a draft framework, with several constituents and associated factors, derived from three main literature strands: psychology, marketing and learning. An operational version of the draft framework (see Figure 4.2) structured the survey of L2 learners. The descriptive and statistical analysis of their responses to the survey refined the initial EA-ISOLL framework (see Table 4.2). Subsequently, L2 experts were interviewed to further probe the relative importance or

irrelevance of the identified putative constituents. I thus considered a range of EA constituents in its different phases and stages. As far as EA constituents are concerned, I generated some mixed and contradictory results during each of its sequential phases and stages. The relationship factor is a good example which, notwithstanding its inclusion in the literature (Bishop, 2003; Cook et al., 2018; Hattie, 2008), was not a constituent factor in the draft EA-ISOLL framework (see Figure 3.6 and Figure 4.2). The analysis of the survey seemed also to downplay the importance of the instructor-student relationship (Table 4.2). However, interpreting the transcripts from experts such as Sandra who stressed the need to build *relevant learning, professional content* and *materials* and the importance of *trust, friendliness* suggested that, in fact, for EA-ISOLL, good relationships underpin the constituents of connection and Social Presence in the validated EA-ISOLL framework (see Figure 7.1). Trust was another factor that emerged in the literature but was downplayed in the draft frameworks (see Figures 3.6 or 4.2) and in the analysis of the survey (Table 4.2) but was, nonetheless, also considered, in the final analysis, an important underpinning for EA constituents of connection and Social Presence.

In short, my investigation into EA-ISOLL shifted between strands of the literature and its empirical investigations and struggled to seamlessly integrate all these findings. However, finally emerged confirmed the proposal of Baumeister and Leary (1995) that for EA-ISOLL, social and interpersonal relationships via frequent, non-aversive (calm and pleasant) interactions are important (Mills, 2020). Even though relationships were not adopted as explicit constituents for the validated EA framework (Table 6.12 & Figure 7.1), relationships and trust underpin the EA-ISOLL constituent of connection (Bowlby, 1973; Drigotas & Rusbult,1992; Wright, Jones, & D'Alba, 2013). The Factor Analysis of the survey responses found trust loaded positively (0.865) onto the first factor but not onto others and so was important for some students. In the

expert interviews, Kate considered trust and friendliness *were among the most highly rated indicators*. Nevertheless, for conceptual elegance, the validated framework subsumed trust a factor within the constituent of connection.

After considering all the triangulated evidence, the final five EA-ISOLL validated constituents are: Affection, Connection, Social Presence, Trust, Flow. To become emotionally attached, online students need to feel positively about their instructor (trust their competence and benevolent intentions) and somehow connected and socially involved in the learning journey. EA-ISOLL is engendered by appropriately pitched learning tasks that are relevant to student learning, sociocultural or disability needs so they engage in cognitive and critical interactions or states of learning flow. However, EA-ISOLL involves constituents that are influenced by other factors (trust, relationships, passion) and conditioned by the language cultural milieu or perhaps parallel formal learning systems. Appropriate L2 language instructor activities foster these five constituents and their supporting factors. For example, Affection involves use of humour, friendliness, use of names and acknowledgement. Connection needs trust and relationships that are nurtured via self-disclosure, authenticity and transparency. Flow emerges when scaffolded lessons generate tasks that continue previous threads but challenge students.

Final List of EA constituents and factors

Having analysed the literature, survey and interview responses, Table 6.12 illustrates the list of EA-ISOLL constituents and associated factors that enable learning (or indeed whose absence can inhibit it). Note that TP and cultural conditioning were not considered in draft framework but emerged inductively during the expert interviews (see Chapter 5) and my own embedded L2 reflections (see s5.4 and the summary in 5.5)

Table 6.12: Final EA constituents

Affection	Affection
Connection	Connection
SP	Use of emotion Use of humour Self-disclosure Group cohesion via greetings/salutations Complimenting others Expressing agreement Using names
TP	Design, interaction facilitation and guidance Interesting interactive lessons, Regular follow-up with students, Compelling yet structured and scaffolded sessions
Flow	Continuing a thread Acknowledgement of others via agreement/disagreement Acknowledgement of others via asking questions Acknowledgement of others via compliments
Culture	Language, context

6.4.4 Objective 5 - Pedagogical implications

The final study objective was to investigate and identify beneficial EA-ISOLL techniques to enhance teaching community pedagogy, inform government educational policies and improve learning institutions. At the same time, I considered alternative student motivation drivers.

When discussing pedagogical enhancement, it is important to recognise that online language learning comes in many forms, not necessarily proficiency at tests. No sensible judgement of learning progression can be made without first considering the initial diversity of the student cohort. Inclusive pedagogy is not limited to a stand-alone lecture on disability but must be embedded in all teacher -training and beyond in a continuous dialogue relating to reflective practice (Lock & Redmond, 2019).

Teachers and L2 instructors need to engage students in well-designed, inclusive curricula (Ball & Cohen, 1996; Department of Education, 2015; Florian, 2010; Page, Boyle, McKay, & Mavropoulou, 2019; UNESCO, 2016; 1994; Warnock ,1978), and sound pedagogy to ascertain and then challenge students' capabilities (Ascough, 2002). To achieve engagement, language instructors need linguistic competence (Neubert, 2000) and must design lessons which are culturally embedded and pragmatic to involve students in appropriate scaffolded problem-solving to overcome real-world foreign challenges.

Clearly, there is a role for EA; however, more important are proper lesson preparation within a logical programme, designed around the interests of learners with clear learning objectives. Such pedagogic fundamental will help ensure that lessons flow naturally. Anastasia noted the importance of *building relationships.* If she underinvested, L2 students became anxious, dis-attached and disengaged from L2 learning. This echoed the psychological attachment material of Bowlby (1969, 1973, 1979) about children's development or by Kobak, Zajac & Madsen (2016) related to family and adult relationships.

The appropriate use of technology can facilitate learning and potentially help to build engagement. To maintain engagement, with frequent, appropriately challenging but low-stress interactions that build trust (Castelfranchi, 2010), ISOLL instructors need judgement, experience,

knowledge, skill and commitment, particularly since they, by definition, operate alone without supporting institutional infrastructure.

The main pedagogical findings of my thesis are that appropriately calibrated EA can inject energy into EP to strengthen TP and SP and so support learning. Without EA, there is no internal cognitive learning transformation. In properly calibrated L2/LX programmes, the trilogy of EA-EP-EIS facilitate the evolution of learning engagement towards more autonomous learning, tailored student education needs. EA-ISOLL needs should feed into a structured and scaffolded programme of learning activities that engage students with formative and summative feedback (Hattie, 2012; Vygotsky, 1962, 1978; Withers & Dill, 2019). Reflective and critical learning is an outcome of the interaction of EA's Affection, Connection, Flow, TP and SP constituents that help to foster needs-focused and progressively structured student L2 content and activities to sustain meaningful discourse and directed feedback (Bardack & Obradović, 2019; Hammond & Gibbons, 2005;Such, 2019; Van Velzen et al., 2019).

In summary, some useful EA-ISOLL pedagogical findings emerged from the attainment of thesis fifth research objective (RO5). First, L2 instructors need to balance EA nurture with L2 structure. Second, for engagement, they should anchor L2 in its cultural milieu for relevance and harness technology. Third, properly designed L2 programmes involve scaffolded activities with regular formative and summative feedback.

6.5 Discrepancies with literature

During the thesis learning journey my relationship with the literature evolved and I altered my position in several respects. First, I developed a much more nuanced idea of the complexities

of general and L2 teaching theories and moved from a transmission approach to more constructivist and collaborative paradigm.

Social conditioning

I now consider that language learning is socially conditioned with micro, meso and macro institutional influences on identity, communication and meaning (Fir Group, 206). However, I do not take the view of Bourdieu (1976) that social conditions over-rule individual autonomy and motivation. Meso social and semiotic conditioners for online language learning include gestures, signs or symbols in uniquely situated emergent interactions. In addition to macro (socio-cultural) or meso conditioners in institutions, classrooms, on learning platforms or via web-bots (Graesser et al., 2016), online micro LX semiotic ones include asynchronous but task-related learning materials, emails or text mojos, emoticons as well as synchronous online discourse visual and audio semiotics like alterations in tone of voice, gestures or facial expressions (2016; Chomsky, 2000; Cole & Engeström 1993; Donato, 1994, 2000; Dunlapa et al.; Lantolf 2000; Lantolf & Thorne 2006 Vygotsky, 1962, 1978; Wundt, 1920). My thesis confirms the vital importance of these social conditioners for engagement. For example, Hugh (R5), got much more engagement form his Chinese and Middle Eastern students when he toned down the critical aspect of his online feedback and became much more sensitive preserving "face".

Discursive collaboration and sense of community

As well as cultural sensitivity and semiotic contextualisation, my research concurred with socio-cultural theory that the fruitful L2/LX online synchronous interactions implies and two-way negotiated rather than one-way didactic interactions with a focus on communicative tasks rather than language structure (Donato, 1994; Vygotsky, 1962). The thesis agrees with Donato (2000, p.44) that learning, is not an "independent accumulation of knowledge", "task objectives"

(aka learning objectives) with "invariant task procedures" involves "uniquely situated emergent interactions" (Donato 2000, p. 44). However, my results suggest LX instructors need to temper their enthusiasm for building a sense of community in online interactions. My findings here then are somewhat at odds with McCafferty et al. (2001) who focus on collaborative tasks or incidental learning mediated. As an illustration, for Q.22 (survey), when asked whether instructor actions should develop a sense of community among course participants, 45.13% were uncommitted.

Listening, dialogue, negotiation and agency

I concurred with the literature on the importance of instructors listening to their students, but my initial line of questioning was insufficiently nuanced to link this to language identity and gender (Heigham & Croker, 2019). For Q.20 in my questionnaire, I asked whether the instructor should help to keep course participants "engaged and participating in productive dialogue". This generated an overwhelmingly positive response with 70 respondents out of 113 (61.95%) strongly agreeing. My analysis of expert interviews (5.2) chimes to some extent with Mercer and Dörnyei (2020) that learners should shape online interactions and their *own learning* journey, although I think instructors should subtly influence the direction of online LX conversations. I agreed with (Ellis, 2017) that instructors need to listen and sensitively employs a range of flexible verbal synchronous and asynchronous written feedback - whether indirect (e.g. for autonomous corpus consultation) or more direct grammatical, semantic or lexical feedback to resolve L2 errors because of L1 blockages. My thesis concurs with Task-Supported Language Teaching because it highlights the need for awareness of and sensitivity to the psychological, social and learning needs of students in specific cultural milieus. Overall, my results support Swain's (2019) notion of *languaging* where collaborative dialogue to complete

linguistic tasks is central. Unlike Cleveland-Innes & Campbell (2012) in the CoI literature, who stressed self-disclosure to reinforce Emotional EP, my research suggests disclosure is relatively unimportant for interpersonal relationships in online settings with only around 43% rating it important.

Framework EA-EP-EI integration and refinement

The EA-ISOLL framework in Figure 7.1 needs further refinement to illustrate the potential deleterious impact of anxious attachments that can undermine learning (Ainsworth et al., 1978) but also to incorporate EP and EI (Majeski, Stover & Valais 2018). In their model, student EP interacts with TP, SP and CP but, unlike in CoI, EP extends beyond emotional expression and links with motivational and affective elements and the control of emotional states prevalent in complex L2 learning. My research suggests, EA influences EP to generate EI that with TP, SP and CP engenders engagement and learning. EA in conjunction with mediated external interactions catalyses internal psychological transformation. In my 2020 updated view, and in light of Swain (2019), *languaging* notion, learning success is not merely CP but also manifests externally as the successful completion of participatory L2 tasks, often but not necessarily in synchronous collaboration with the instructor (in my particular case with its one on one focus). I also agree with Ellis (2017) that the task portfolio of the L2 online instructor is broad and can sometimes include consciousness-raising activities to help learners advance their metalinguistic understanding

Emotions, learning and inward transformation

My thesis confirmed the importance of regulated emotions to both motivate students and support LX learning (Averill,1982; Dewaele, 2010; MacIntyre, 2002; Fussel, 2002). I agree with Dörnyei (2020) that the judicious use of emotions as part of EP and EI can motivate and support

learners and, together with structure, lead to autonomy (Jang et al., 2010; Majeski, Stover & Valais, 2018). In one of my interviews, for example, Kate (R1) said students embraced online Skype delivery when she listened to their needs and injected some sympathetic emotions into her online synchronous feedback. I agree with Curren (1998) that learning is a public good with moral and humanitarian dimensions beyond simply job training. Although I found a plethora of learning theories (Brown, 2018; Garrison & Kanuka, 2004; Rourke & Kanuka, 2009), my research indicates that deep and meaningful LX learning requires both external negotiated interactions and an inward psychological transformation (Vgotsky, 1961).

Literature on methodology

My thesis wrote up the analysis of quantitative and qualitative research and reviewed a substantial body of literature in these areas. I found much of the quantitative literature both inaccessible and frustrating for my research needs and my statistical results reflected the limitations of an approach not only masks a lot of variety but also can be very misleading when the questionnaire design and data collection is not carefully crafted to take account of diverse socio-cultural conditions and L2 language constraints. Having read e.g. Bettez (2015), my positionality has evolved during the research I began with somewhat conventional and limited (didactic) view of what constituted LX teaching. Now, my positionality is more nuanced, student-centred and constructivist. Notwithstanding, the evolution of my positionality during this thesis journey has allowed more nuanced critical reflection on the assemblage of people involved in LX teaching and research (instructors, participants, co-researchers). I am now more conscious of structures of oppression and seek to maximize my awareness of multiplicities of assemblages or a "meshwork" of social identities with more awareness of the dangers of inadvertently smothering potentially conflicting viewpoints and, thereby, abetting social

oppression (Hames-Garcia, 2011). For future research in the EA field, I would consider adopting latent thematic analysis to understand sensitivity to different L2 student identities and assemblages (Bettez, 2015) and subtle, structures of oppression (Hames-Garcia, 2011) in diverse cultural settings.

6.6 Summary

The discussion in Chapter 6 consolidated evidence relating to RO1 and its subsidiary objectives. In each area, I recapitulated and reflected on the online survey and expert interview results in the light of the key literature. To clarify EA meaning (RO2), three strands of literature were reviewed. Two main conclusions were reached: that EA is not just incidental but is critical for learning when properly calibrated to "charge" EP and student engagement.

To meet its third objective (RO3), I used mixed methods with quantitative and qualitative approaches with mixed results. The same methodology again produced a mixed picture in terms of the various EA constituents identified quantitatively for the refined and then qualitatively for the validated framework. As an example, the literature review had identified passion as a potential EA constituent (see Figures 3.6 and 4.2) but the statistical analyses carried out in Chapter 4 downplayed its importance. However, noting the limitations of the research, the findings highlighted the importance of culture, scaffolding for flow and collaboration.

The fourth objective (RO4) involved the isolation of the factors which underpin EA or ISOLL model the calibration. The literature pointed towards many potential drivers of EA. These factors were incorporated into a draft explanatory framework which was then investigated, first, via the online survey of instructors and LX students and, second, by interviewing seven experts. The empirical results and reflection identified five main EA-ISOLL constituents - Affection,

Connection, Social Presence, Teaching Presence and Flow (see figure 7.1), although for learning EA is supported by secondary factors, influenced by language culture and manifests in EP and, later, as autonomy evolves, in EI so that students can switch on and off emotions to engage in contentious LX debates, access a written corpus to draft appropriate LX responses as part of an evolving and increasingly autonomous, creative and robust dialogue with their LX online facilitator.

Finally, Chapter 6 discussed some useful pedagogical practices (RO5). The combined analysis of the views of experts and learners has greatly enriched the understanding of emotional attachment and language learning. Clearly, there is a role for EA, however, its salience varies, depending on the student's needs. Just as important, if not more so than emotions are proper lesson preparation within a logical programme, designed around the interests of learners with clear learning objectives. Such pedagogic fundamentals help ensure engaging lessons flow naturally. This chapter integrated the empirical findings from the survey, expert interviews and literature. Effective informal synchronous online language learning requires cultural and social sensitivity.

The final study chapter identifies study findings and contributions, teases out policy implications, identifies limitations and proposes future research directions. It presents a refined and validated summary EA framework that synthesises the literature, the survey, expert interviews and my own embedded online L2/LX teaching reflections.

Chapter 7 Conclusion

7.1. Overview

The final chapter of the thesis summarises the investigation into emotional attachment (EA) for informal synchronous online language learning (ISOLL). It briefly reviews the objectives, framework, and methodology and outlines the thesis structure. In addition, this final chapter presents my EA findings and a summary framework in Figure 7.1. The figure is accompanied by detailed textual elaborations of the twin internal and external EA mechanism that supports LX learning engagement and cognitive transformation. The chapter also teases out implications, study contributions, identifies limitations and proposed future research directions.

7.2. Research motivation and learnings

After years of synchronous online language teaching, I realised that the field was in a state of flux; new technologies were evolving rapidly yet the core professional issue of how best to harness these disparate technologies and to engage with students remained unresolved. I speculated on the extent to which emotions influence online synchronous learning in informal settings (ISOLL). Emotions influence many aspects of everyday life, including brand appeal, building values, neighbourhood attraction, relationships, and student learning engagement. Anecdotal teaching experience suggested that emotions were somehow important for learning because I knew that technology and lesson planning or interesting tasks were, in themselves, necessary but insufficient to engage my language learning students. I was determined find clarity on the EA notion, its link with learning and evidence to estimate its impact and to understand exactly how it works or what were its limits. Challenges for my research included different meanings of emotional attachment in different fields, diverse learning theories with

different recommendations, and diverse students for diverse cultures with different motivations and technological capabilities. This thesis described my investigations into EA for ISOLL. Its formal research question was, *How can emotional attachment be harnessed to enhance second language learning in diverse informal online settings?*

To resolve the EA conundrum, I articulated formal research objectives, however as my insights into the complexity of the field evolved, my research became more iterative, exploratory and dialectical. Ironically, for me, one of the main outcomes of the thesis was my own learning journey! My thinking about L2 learning matured from a cognitive transmissive to a more constructivist and interactive learning paradigm. I softened my unduly didactic teaching style and listened more to the diverse assemblage of my L2 student narratives. I tuned into the socio-cultural conditioning that influenced their online identities and listened more carefully to student interpretations. This helped me engineer interactive synchronous and authentic one-on-one L2 tasks and dialogues or suggest a corpus of relevant L2 written or phonetic material to support autonomous learning.

7.3 Study structure and methodology

The research used a mixed sequential explanatory mixed methods approach to investigate EA for ISOLL. The literature helped develop a draft explanatory framework (Figure 3.6) for online investigation and refinement that was then operationalised (Figure 4.2). The survey helped to eliminate some non-critical factors for a refined framework (Table 4.2). The refined framework was validated and enriched via expert interviews and discussions (Figure 7.1). I found that EA is a critical aspect for learning and is conditioned by the cultural milieu of the language under instruction.

The final refined and validated EA framework emerged from the synthesis of the reflective iteration between the literature and the empirical results. In the final framework, Relationships and Trust were not validated as EA-ISOLL constituents but these two notions support Connection and Social Presence. In making this assessment, I integrated survey results, the literature, expert views and my own anecdotal L2 instructor evidence

In the first chapter, I reviewed the contentions around learning and emotions and formally articulated the EA problem. In the second chapter, I investigated the various strands of EA literature both to define EA and to articulate its key features. I found various definitions of EA in the psychological, educational and marketing literatures but also encountered multiple aspects to learning in complex settings with diverse students. The literature suggested that learning is influenced by emotions and various other factors such as motivation and flow in complex, adaptive dialectical learning processes. The structured literature review of EA and ISOLL was used to generate the draft explanatory framework (see Figures 3.6 and 4.2). Four key points emerged from the literature. First, that EA is not just incidental but critical for learning. Notably, emotions underpin brain functioning, high-level cognitive skills and chances of survival. Second, EA-ISOLL operates within complex dynamic learning systems embedded in diverse sociocultural and institutional milieus. Third, several EA constituents and associated factors interact to support learning. Finally, given all the competing factors and influences on learning, the salience of EA and its constituents likely fluctuates during the student learning journey in a similar way that genes can switch on or off during an organisms lifetime to influence biological processes or the way a cook either spices up or tones down seasoning of a dish to reflect his clients tastes.

Having identified issues and generated a putative framework, the third chapter outlined suitable methodological approaches to investigate these matters. Whilst useful for some as aspects of the EA-ISOLL problem, it was clear that a purely statistical approach would be inadequate and that mixed methods offered the best approach for a complete answer into the emotional attachment and learning conundrum. The research adopted a sequential explanatory approach but used mixed methods with both quantitative and qualitative analysis.

The fourth chapter of the thesis described the two-stage analysis of my survey of L2/LX instructors and language learners (Table 4.2). Initially, I analysed 114 responses descriptively and graphically to gain an understanding or the main EA constituents. Once, I had collected 150 respondents, I analysed the data statistically using a range of techniques to isolate the impact of cultural context, explore the data for patterns and find associations between learning and EA constituents. This Stage II of the survey analysis proved, in many ways, frustrating because the only clear result was that the context influenced the stated view of the students on EA and learning. On reflection, this is hardly surprising because questionnaire design and the execution of the survey could have been, respectively, tighter and more sensitive to the influence of culture on interpretation of questions and constructs.

The fifth chapter involved interviews with ISOLL experts and practitioners. I interviewed seven experts to ascertain their views on EA and learning and the refined EA-ISOLL framework (Table 4.2). The experts helped to make selections for the hypothesis matrix but also provided rich EA insights and practical pedagogical advice which helped formulate key findings and articulate policy recommendations. The results validated the post-survey refined EA framework.

The previous chapter (Chapter 6) discussed and reflected on results of the survey (Chapter 4) and interview (Chapter 5) in the light of the literature. This final chapter presents the refined and

validated EA framework in Figure 7.1 with an accompanying explanatory narrative. The chapter summarises the findings, outlines the contributions and limitations of the research and suggests further fruitful lines of inquiry.

7.4 Study key conclusions

The research found that emotions are a key for development, social relations and learning. Emotions are shorter, more intense and episodic than moods and are situated in an interlocking physiological, socio-cultural, behavioural and linguistic hierarchy but are crucial to mediate meaningful LX interactions. Psychologically, EA involves longer-term bonding with important and measurable cognitive and intelligence implications, but these special affective bonds need careful management if they are not to become anxious. Emotions help strengthen relationships and, hence, engage students. EA helps nurture a positive disposition and optimism needed for overcome numerous impediments to L2/LX efficacy. My framework builds on CoI, EP and EI models where EP interacts with TP, SP and CP in socio-culturally conditioned interactions. For me, regulated EA, energises EP (in both instructors and student) and feeds into the development of EI for autonomous self-management of complex L2/LX learning. Beyond this supportive external energising function of EA for EP, it is a necessary investment for internal cognitive and psychological transformations needed for deep and meaningful LX/L2 learning investment. Transformation needs sustained and appropriate emotional support (nurturing) with appropriate (culturally and technically calibrated) structure and repeated interactive tasks or reciprocal dialogues with pragmatically resonance for student aspirational identities. These interactions facilitate the transformative exchanges of meaning that constitute student-centred L2 learning. Analogously to the psychological literature, I found that perceived threats of instructor

unavailability or unresponsiveness can lead to anxious attachment, that disrupts learning progression.

To evoke and channel emotions productively for language learning, instructors need to engage in a structured or scaffolded but interesting way that considers the student sociocultural backdrop and learning needs. Teaching resources should harness culturally and phenomenologically relevant problems or be related to students' actual lived sociocultural experiences. In this way, students feel affection, connect with issues, reflect and critically engage in language learning flow, demonstrating Cognitive Presence.

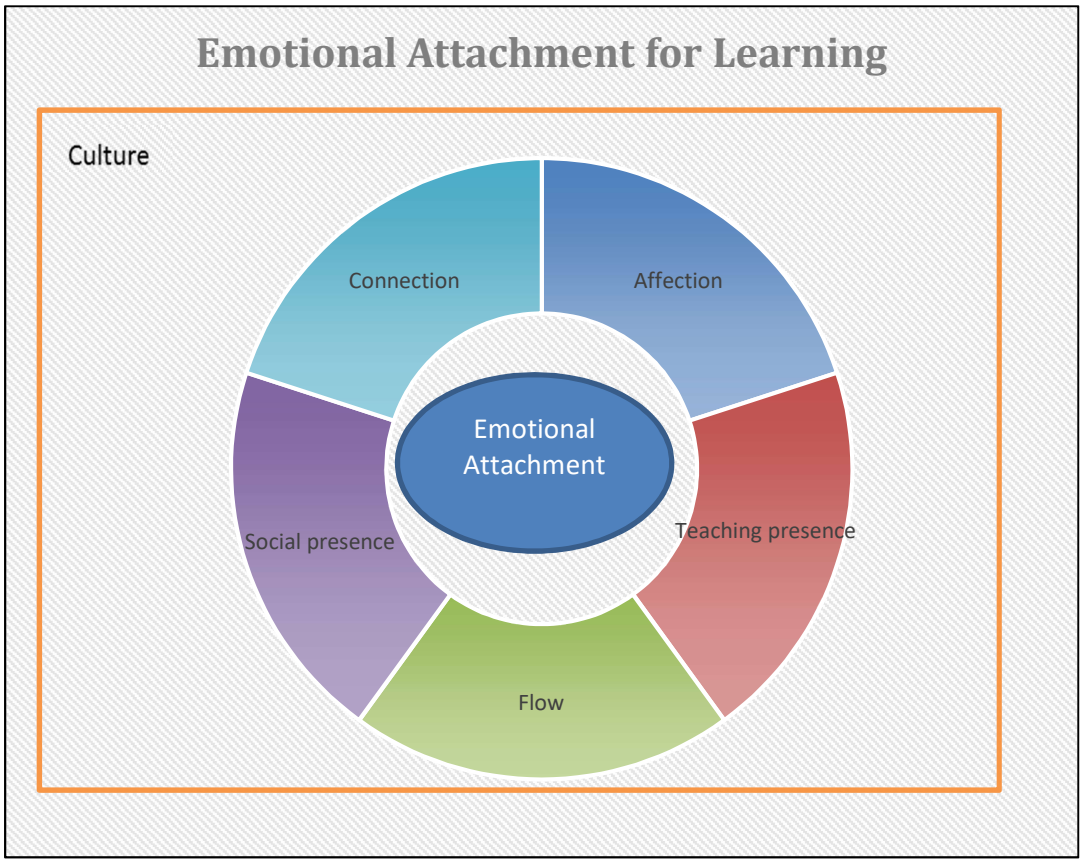
EA for ISOLL has five constituents: Affection, Connection; Flow, Teaching Presence and Social Presence. The combined analysis of experts' and learners' views greatly enriched EA-ISOLL understanding. Clearly, there is a role for EA; however, however its salience and online genesis varies depending on the student's needs, parallel formal learning situation, home or work and sociocultural context. Just as, if not more, important than emotions are the online climate and setting and adequate instructor lesson preparation. L2 lessons need to be guided by a logical programme, but this needs to be guided by student needs, shaped by dialogue and sensitive to diverse sociocultural settings. In an informal setting, whilst instructors may sketch tentative initial learning objectives, online L2 instructors must listen to student interests and even let them shape lessons in an interactive engagement between two distinct historic-socio-cultures (Engeström 1987; Cole & Engeström, 1993). Such pedagogic fundamentals should help ensure engaging lessons flow naturally. Feedback is critical but needs to be interactive, respect the student's situation and be preceded by setting the right online climate so that errors are welcomed as learning levers. The ISOLL instructor needs to set appropriately challenging goals and craft feedback to maintain scaffolded engagement and learning flow.

The findings revealed that EA is significant for online learning. However, EA needs to be culturally embedded and supported by sensible L2 programme design. L2 instructors need to be enthusiastic but without ostentatious and ill-informed online displays. Rather, professional online teaching involves skilfully identifying and accommodating online student diversity within an overarching scaffolded structure. Instructors need to react synchronously during learning dialogues for compelling, interactive sessions. Instructors need to follow up online lessons with regular and appropriate student feedback via phone, email or on forums. Teachers must demonstrate a sincere interest in learners and tune in to their needs. EA only develops with regular and frequent online interactions that allow for leaning to and from students. Lessons need to be culturally relevant and build trust by repeated positive engagements, using a variety of media texts and appropriate, engaging activities, lesson pace, listening and feedback. Instructors also need to use newly introduced language frequently.

Clearly, EA is nurtured by cultural engagement, talking with student and proper lesson preparation within a logical programme, designed around student interests, needs and culture. A good understanding of student diversity can help craft clear and tailored learning objectives that inform subsequent feedback. Such pedagogic fundamentals support the engaging and culturally embedded lessons that flow naturally for engagement.

EA moderates the intensity of EP and EI that regulates external social interactions but, crucially, it also catalyses the transformation of psychological states (Переживание). In EA-ISOLL, respectful relationships and learning engagement is built on trust via sustained, scaffolded and culturally sensitive collaborative task-focused interactions with his or her online instructor (external) and that enhances CP (internal) and results in internal psychological transformation of consciousness. For reasons of practical expositional clarity, I excluded

Cognitive Presence (CP) from my EA-ISOLL framework in Figure 7.1 but the accompanying text makes it clear that true and meaningful LX learning invokes an internal psychological and cognitive transformation[5]. Figure 7.1 also simplifies links between TP, SP, CP, EP and EI that engender engagement and autonomous LX learning. For EA-ISOLL, reflective learning and critical analysis is not a constituent but, rather, an outcome of TP, SP and Flow in scaffolded interactions where students feel Connection and Affection. Instructors can use EI and cultural knowledge to inspire students and so elicit a state of learning Flow with its accompanying internal cognitive transformation.



[5] In Russian Переживание

Figure 7.1 EA for ISOLL (Informal Synchronous Online Language Learning) (Source: Author 2018)

As noted, the Figure 7.1 diagram above omits three key aspects of EA for leaning. First, the subtle and dynamic nuanced relationship between EI, EP and EA. Second, the relationship between CP and internal psychological transformation required for deep and meaningful LX learning. Finally, the dynamics between learning support (nurture), scaffolded structure and collaborative, negotiated interactions.

Overall, the research clarified what EA is and its complicated role in helping to foster (or indeed hinder) informal online LX learning in diverse cultural settings.

7.5 Implications

The thesis has strategic, operational, grounded and technical implications for policy and teaching practice.

Strategic

The first strategic policy implication is that, paradoxically, so called "informal" online teaching involves considerable design considerations and professional expertise. When designing informal online courses, instructors need to consider the complex and evolving interplay between EA, EP, EI, SP, TP, CP and learning. My framework, illustrated by Figure 7.1 below and expounded in the associated textual clarifications, helps LX instructors refine their situational awareness, regulate emotions, balance nurture, scaffolded structure and negotiated interactions. The framework illustrates the importance of cultural conditioning and the need to

listen to students but inject or regulate emotions, as appropriate. Whilst this study focused on online informal online language learning, its ramifications extents to non-linguistic fields and more traditional delivery modes. Institutions need to carefully map emotional support they provide their students during their learning trajectory towards autonomy.

Operational and tactical

Apart from my EA-ISOLL framework as a strategic LX guide, the thesis has operational and tactical implications for L2/LX online learning. Authentic learner-driven interactions should be a central consideration. Rather than being "pedagogically contrived" these interactions between L2 online instructors and learners must be shaped by students' own interests and agendas with instructors adapting and providing suitable scaffolding rather than didactic content. Therefore, online LX dialogues should either continue a previous life issue thread or broach a new culturally embedded topic. As L2 student online identity shifts from novice to expert, they assume greater learning autonomy. Especially initially, EA enhances online EP of instructors or students that can nurture student engagement but, just as in mainstream education, the need for student EA evolves online as power dynamics shifts. The implication for institutions is that instructors need to build professional relationships with students over time. Casualisation and business-inspired models of "efficiency" involving the widespread substitution of permanent staff with agency teachers is pernicious. Institutions need to recognise the tension between their short-term financial performance measures and their substantive educational function.

Grounded in dynamics and evolution towards autonomy

One of the themes that emerges from my research is that the situation of informal LX learning interactions is very diversified both horizontally, across different cultures and settings, and vertically as students develop over time. The key policy implication is that there is no

simplistic, static blueprint for EA in any given informal online context. Some students will require a lot more emotional support than others but the LX instructor needs to gradually wean the student off the drug of emotional support to avoid anxious attachments and launch him or her on the way to autonomy via interactions and assessments with a progressively weightier cognitive load or more challenging LX interactions. The policy implication for educational training institutions is that teachers need training in recognising and managing the vagaries of emotional context and dynamics. As in mainstream formal education, in informal e-learning contexts, practitioners need to carefully calibrate learning programmes based on student socio-cultural, identity goals and future aspirations or long-term personal motivational trajectories. Effective ISOLL instructors need to engage with their students by prudently and responsibly revealing aspects of their online identity or share with L2 students' facts, thoughts and emotions in depth and breadth for an enriched not robotic professional relationship. Ironically though web-based bots, are becoming and will increasingly become more useful (Graesser et al., 2016). Dialogue related to culturally embedded but real-life problems facilitates such meaningful interaction. In short, effective informal synchronous online language learning therefore requires honesty and cultural and social sensitivity. Instructors need to identify relevant issue or problems (triggers) for students to explore and reflect on and then integrate and apply them. TP therefore necessarily involves harnessing culture and emotions to help students to probe ideas, integrate learning and stimulate critical reflection so new knowledge can be applied at home or in their workplace.

Another practical operational implication of my study is that attachment can become malignant if unbalanced. In other words, LX instructors need to maintain an appropriate professional distance and ensure that initial emotional nurturing for engagement bears fruit and

dovetails into structured progress towards more and more independent learning. The skilled instructor balances nurturing with structure to engage students in well-designed culturally sensitive L2 programmes with scaffolded sequences of learning resources and activities that reflect students' needs but also challenge them and apply language in relevant sociocultural situations.

Technical

The technical implication of my study is that institutions and teachers must expect and prepare for an ever-changing technological ecosystem. As well as situational awareness of this evolving technological landscapes, its benefits and pitfalls, training course for teachers or lecturers should expose them to the latest learning management systems, technologies and applications so that they are equipped to manage or deliver face to face, blended or online programmes and modules, as pandemic or other circumstances dictate. Even as online web bots develop (Graesser et al., 2016), LX students will still need the support and direction of instructors who will enrich and refine technological interactions. More important than the configuration of the latest software or hardware specifications is the realisation that technology is provides support to enrich content, increae interactions and enhance engagement and cognitive transformation towards autonomy. Frequent low-stress virtual interactions build trust and connection. Appropriate use of technology illuminates learning and builds engagement and flow and, together with TP and SP enhances CP. Regular and non-stressful feedback helps students to identify issues and to refine their linguistic competence.

7.6 Contributions

My thesis made academic and practical teaching and other contributions.

1. Obviously, my main one was to clarify EA and synthesise a range of evidence that illustrates how it influences L2 learning in informal one-on-one settings. Currently, limited research is available on the role of EA in informal synchronous language learning (ISOLL).
2. My second academic contribution was to unify disparate interdisciplinary concepts from psychology, learning and marketing with practical instructor insights and industry experience to develop my EA-ISOLL explanatory framework. This framework itself contributes to learning discourse and helps understand the role and limits of emotions to nurture engagement and catalyse learning.
3. I identified five main constituents of EA - Affection, Connection TP, SP and Flow that engender reflective learning and clarified the complex interactions between EA, EP, EI, TP, SP and CP. EA strengthens EP and feeds into EI that supports increasingly autonomous learning.
4. I articulated the role of EA in enhancing EI to enable calibrated participation, so students achieve L2 flow and or a transformative conscious experience[6] that integrates eternal culturally conditioned LX dialogue with an altered and emotionally charged internal psychological state. EA energises the cognitive transformation that results from progressively more challenging online L2 tasks and activities.
5. My mixed methods approach and my own critical reflections on its limitations made a methodological contribution. In its first phase, I deployed a semi-structured survey to

[6] Переживание in Russian

probe the opinions of learners and teaching experts on the various factors that facilitate or hinder informal synchronous online learning. I then enriched the survey with expert interviews and embedded reflections that chart a pathway for future EA research.

6. As well as my academic and educational contributions, I also made an incidental social one by articulating more accessible L2 language learning for a wider spectrum of students from diverse cultural backgrounds by enhancing the emotional resonance of the online experience. My thesis helps to widen L2 participation by providing some practical pedagogical suggestions that can improve online student experience, EA and, therefore, online informal course engagement.

7.7. Research limitations

My research results are preliminary and has several internal and external methodological and researcher limitations. As a researcher and practicing informal synchronous instructor, my experience was limited to German, Russian and English languages. As well as limited range of languages and cultures (e.g. no Oriental languages or cultural experience), my immersion in everyday ISOLL could have biased my views.

Another limitation of my study involved definitions and construct validity so that selected indicators consistently and reliably measure what they are supposed to. The EA-ISOLL study corroborated definitions in the literature and checked technical, construct validity for some variables, like Learning Success, with Cronbach Alpha tests. Results of over 0.80 provided some comfort in its internal reliability of tested variables whilst other variables, such as Attachment

were underpinned by support in the literature. Notwithstanding, externally, students from different cultural backgrounds who answered the survey questions, could have understood notions differently.

Notwithstanding the methodology, a significant research limitation of these mechanism is that it relied on the stated views of learners, practitioners or experts rather than quasi-field experiments. With the benefit of hindsight, I think I could have handled the questionnaires and interviews more sensitively with respect to the breadth of interviewees in terms of diversity but also in handling any potential linguistic misunderstandings when conducting TESOL tests in widely diverse settings and reflected more on appropriateness, impacts, and administration of the instrument (Woodfield, 2010; Winke, 2011).

Beyond linguistic issues, I did not use a randomised trial to test learning in enriched or depleted EA settings. Instead, it collected the opinions of a range of users and instructors. Opinions can be unreliable. An obvious external methodological limitation of the study was the relatively limited sample sizes and their non-random generation. Neither the survey respondents nor the experts were representative of the full range of ISOLL students or instructors. The main reason behind this limitation was constraints of practical resources for a part-time doctoral student. However, the sample was adequate statistically and, more importantly, the EA-ISOLL research included a qualitative stage, that mitigated the impact of its restricted and non-random sampling. For these interviews, respondents were experienced language instructors rather than a diverse learning community.

Arguably, for the processing of the survey, the research could have weighted responses to increase the salience of expert instructor opinions; however, this tinkering would be in some sense arbitrary. A hierarchical stepwise regression approach could also have yielded better

results because it would have controlled cultural and, in some cases, parallel formal educational system influences on online L2 learning. Fine tuning the quantitative sequences of the research though would not eliminate the need for subsequent idiosyncratic investigations to tease out the causal nuances to understand EA-ISOLL gaps in current practices.

Notwithstanding its limitations, the thesis provides a credible and replicable, if initial, analysis of EA-ISOLL. The literature review, survey results, expert interviews and embedded reflections balance nomothetic with idiosyncratic insights for considered view on the role of emotional attachment in language learning. Transferability and generalisability of results come from the fact that the respondents and interviewees were from many, diverse countries. I detailed its research steps and Appendix A provides a copy of the survey instrument. In short, the research limitations were mitigated by the mixed methods and triangulation of literature, survey and interviews.

7.8. Potential areas for further research

For practical reasons, the research had a limited participant base which any future study could increase. A larger and more diversified sample (e.g. including more Oriental and African students) would enable a stronger quantitative analysis involving, hierarchical stepwise regression. Apart from expanding samples, as previously noted, future research could involve an entirely different approach by, for example, running a focus group meeting or using a modified Delphi approach or even conducting experiments, with randomised trials of cohorts, either exposed to EA enhancement techniques or placebos. Further EA research could involve switching focus to language teaching in formal settings. Other practical emotional online pedagogy research should consider how to develop online ecosystem to support students unable to attend face-to-face classroom-based lessons or, more widely, to cope with distancing

constraints imposed by pandemics, such as the recent COVID 19 outbreak. Another area of applied EA research would be to consider tailoring online learning tools for different contexts – for example, indigenous Australians, people living in remote areas or military personnel.

7.9 Chapter summary

This final chapter reviewed the research objectives and focus, summarised its structure and methodology and highlighted the key conclusions of the ISOLL investigation. I articulated the thesis contributions in the academic and social fields and outlined its internal and external research constraints. The chapter also suggested possible lines for further emotional attachment and learning research. I presented the final, validated emotional attachment (EA-ISOLL) learning framework that synthesised the literature as well as the quantitative and qualitative evidence from both learners and experts. This validated framework intimates a significant nurturing and cultural supporting role for EA in learning and illustrates its constituents, mediated by diverse, distributed sociocultural milieus. The thesis reinforces the view that L2 learning involves collaborative journey of interactions that are mediated socio-cultural milieus. Facilitators need to identify diverse student needs or interests and encourage appropriate but meaningful L2 communication and interactions. Paradoxically, to engage L2 students for meaningful learning even in so-called informal online contexts involves extensive technical linguistic and teaching knowledge to design appropriate learning structures and support autonomous learning.

Understanding the broader context of language learning can help ensure engaging lessons which flow naturally but also avoid pitfalls, rooted in a simplistic interpretation of linguistics which ignore the historical conditioning of meaning, norms and communications in different cultures. Student-teacher bonds can be undermined by lack of progress visibility or sociocultural

insensitivity. Rather, L2 instructors should seek to harness emotions productively for language learning flow and engagement. They need to continuously refine practice and augment their teaching presence to strengthen trust and stimulate student critical reflection (CP). In short, developing skills to manage informal synchronous online learning involves crafting and wielding multiple skills, certainly much more than simply harnessing appropriate technologies. The EA-ISOLL research echoed the psychological literature and noted the dis-engagement risk and high reparative costs of ignoring your students sociocultural and learning needs when designing or facilitating learning.

The thesis has now answered its main research question. To do this, it defined emotional attachment in relation to learning as an enduring internal psychological bond between student and instructors or lessons that nurtures second language engagement and learning investment. It is fostered by sustained, and well-calibrated interactions, attuned to target language and student's own culture as well as evolving learning needs. EA-ISOLL is calibrated so its nurturing complements structured, albeit informally delivered, learning. Paradoxically, EA for so-called "informal" learning involves considerable expertise and foresight to plan, develop and deliver both technically and linguistically appropriate materials but also the psychological supports needed to nurture student engagement and investment for learning. Eventually, as the quality of student-teacher interaction develops and student learning becomes deeper and more autonomous, some of the emotional support may dissolve to avoid mutating into an anxious attachment. Thus, L2 instructors need to balance EA's nurturing functions with informed L2 structure, involving sensitively to cultural milieu, scaffolded activities that harness suitable technology. As L2 learners develop, emotional and scaffolding progressively falls away for flow, although instructors remain on standby to provide appropriate emotional and cognitive support. My

research has several limitations that I have extensively discussed in methodology sections and my discussion of limitations (s7.5). With the benefit so reflective hindsight, for any future L2 research I would be more sensitive to the risks of qualitative misinterpretations in different cultural backgrounds. I have increased the overall trustworthiness of my research and the usefulness of my thesis for future L2 research and practice by clearly articulating my research position and the limitations of interviewee diversity, qualitative interpretations and findings.

References

Adolphs, R., Tranel, D., Damasio, H. & Damasio, A. (1994). Impaired recognition of emotion in facial expressions following bilateral damage to the human amygdala. *Nature, 372*(6507), 669-672. doi:10.1038/372669a0.

Aguinis, H. & Henle, C. (2004). Ethics in Research. *Handbook of Research Methods in Industrial and Organizational Psychology*, *5*, 34-56. doi: 10.1002/9780470756669.

Ainsworth, M., Blehar, M., Waters, E. & Wall, S. (2015). *Patterns of attachment: A psychological study of the strange situation*. New York: Psychology Press. doi:10.4324/9780203758045.

Akyol, Z., Arbaugh, J., Cleveland-Innes, M., Garrison, D., Ice, P., Richardson, J. & Swan, K. (2009). A response to the review of the community of inquiry framework. *Journal of Distance Education*, *23*(2), 123-136.

Albert, N., Merunka, D., & Valette-Florence, P. (2013). Brand passion: Antecedents and consequences. *Journal of Business Research*, *66*(7), 904-909.doi:10.1016/j.jbusres.2011.12.009

Altman, I. & Taylor, D. A. (1973). So*cial penetration: The development of interpersonal relationships*. New York: Holt, Rinehart & Winston.

Anderson, T., Liam, R., Garrison, D. R. & Archer, W. (2001). Assessing teacher presence in a computer conferencing context. *Journal of Asynchronous Learning Networks*, *5*, 1-17.

Anderson, T. (2004). Towards a theory of online learning. *Theory and Practice of Online Learning*, *2*, 109-119.

Anderson, T. & Kuskis, A. (2007). Modes of interaction. *Handbook of Distance Education*,*2*, 295-309, Mahwah, NJ: Lawrence Erlbaum

Aron, A. & Westbay, L. (1996). Dimensions of the prototype of love. *Journal of Personality and Social Psychology*, *70*(3), 535 - 551. doi:10.1037/0022-3514.70.3.535.

Artino, A. R. (2012). Emotions in online learning environments: Introduction to the special issue. *The Internet and Higher Education*, *3*(15), 137-140 doi:10.1016/j.iheduc.2012.04.001.

Ascough, R. (2002). Designing for online distance education: Putting pedagogy before technology. *Teaching Theology & Religion*, *5*(1), 17-29.

Attrill, A., & Jalil, R. (2011). Revealing only the superficial me: Exploring categorical self-disclosure online. *Computers in Human Behaviour*, *27*(5), 1634-1642.

Attrill, A. (2012). Self-disclosure online. *Encyclopedia of Cyber Behavior*, 855-872. De Montfort University, UK: IGI Global. doi: 10.4018/978-1-4666-0315-8.ch071.

Attwell, G. (2007). Personal Learning Environments-the future of eLearning. *Elearning Papers*, *2*(1), 1-8.

Averill, J. (1982). *Anger and aggression: An essay on emotion*, New York: Springer-Verlag.

Ball, D. & Cohen, D. (1996). Reform by the book: What is—or might be—the role of curriculum materials in teacher learning and instructional reform? *Educational Researcher*, *25*(9), 6-14.

Bandura, A. (1977) *Social Learning Theory*. New York: General Learning Press.

Bandura A. (1998). Personal and collective efficacy in human adaptation and change. In Adair JG, Belanger D, Dion KL (Eds.), A*dvances in psychological science, Vol. 1: Personal, social and cultural aspects* (pp. 51–71). Hove, UK: Psychology Press.

Barak, A. & Gluck-Ofri, O. (2007). Degree and reciprocity of self-disclosure in online forums. *CyberPsychology & Behavior*, *10*(3), 407-417. doi:10.1089/cpb.2006.9938.

Bardack, S. & Obradović, J. (2019). Observing teachers' displays and scaffolding of executive functioning in the classroom context. *Journal of Applied Developmental Psychology*, *62*, 205-219

Bates, A. & Poole, G. (2003). *Effective teaching with technology in higher education: Foundations for success*. Indianapolis, IN: Jossey-Bass.

Bates, A.W. (2005). *Technology, e-LL and Distance Education* (2nd Ed.). New York: Routledge.

Batra, R., Ahuvia, A., & Bagozzi, R. (2012). Brand love. *Journal of marketing*, *76*(2), 1-16.

Baumeister, R. & Leary, M. (1995). The need to belong desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, *117*(3), 497-529. doi:10.1037/0033-2909.117.3.497.

Bennett. K., Allen, P. & Heritage, B. (2018). *SPSS Statistics: A Practical guide (*4th Ed.). Melbourne, Australia: Cengage Learning Australia.

Benson, A. (2002). Using online learning to meet workforce demand: A case study of stakeholder influence. *Quarterly Review of Distance Education*, *3*(4), 443−452.

Benson, P. (2007). Autonomy in language teaching and learning. *Language Teaching, 40*(1), 21-40. doi:10.1017/S0261444806003958

Benson, P. (2011). Language learning and teaching beyond the classroom: An introduction to the field. In P. Benson & H. Reinders (Eds.), *Beyond the language classroom: The theory and practice of informed language learning and teaching* (pp. 7–16). New York: Palgrave Macmillan

Berk, L. & Winsler, A. (1995). *scaffolding children's learning: Vygotsky and early childhood education. NAEYC Research into Practice Series. Volume 7*. National Association for the Education of Young Children, Washington, (NAEYC catalog# 146).

Bettez, S. (2015) Navigating the complexity of qualitative research in postmodern contexts: assemblage, critical reflexivity, and communion as guides, *International Journal of Qualitative Studies in Education*, *28*(8), 932-954. doi: 10.1080/09518398.2014.948096

Birnbaum, G. & Reis, H. (2019). Evolved to be connected: The dynamics of attachment and sex over the course of romantic relationships. *Current Opinion in Psychology*, *25*, 11-15. doi:10.1016/j.copsyc.2018.02.005

Bishop, R. (2003). Changing power relations in education: Kaupapa Maori messages for "mainstream" education in Aotearoa/New Zealand. *Comparative Education*, *39*(2), 221–238.

Biss, R. & Hasher, L. (2011). Delighted and distracted: Positive affect increases priming for irrelevant information. *Emotion*, *11*(6), 1474- 1478. doi:10.1037/a0023855

Blazina, C., & Kogan, L. (2019). Do men underreport and mask their emotional attachment to animal companions? The influence of precarious masculinity on men's bonds with their dogs. *Anthrozoös, 32*(1), 51-64. doi:10.1080/08927936.2019.1550281

Block, D. (2003). *The social turn in second language acquisition*. Washington: Georgetown University Press.

Bloom, B. (1956). Taxonomy of Educational Objectives: *Cognitive and Affective Domains* New York: David McKay Company Inc.

Bogner, A. & Menz, W. (2009). The theory-generating expert interview: epistemological interest, forms of knowledge, interaction. In Bogner A., Littig B., Menz, W. (Eds.) Interviewing experts (pp. 43-80). London: Palgrave Macmillan.

Bourdieu, P, & Boltanski, L. (1975). Le fétichisme de la langue. *Actes de la Recherche en Sciences Sociales*, *1*(4), 2-32

Bourdieu, P, (1979). Les trois états du capital culturel. *Actes de la Recherche en Sciences Sociales, 30*(1), 3-6.

Boud, D. (Ed.). (1988). *Developing student autonomy in learning*. London: Routledge https://doi.org/10.4324/9780203059036

Bowlby, J. (1969). *Attachment and loss.* London: Hogarth Press.

Bowlby, J. (1973). Attachment and Loss: Separation: anxiety and anger (2nd Ed.). Minnesota, USA: Harper Basic Books.

Bowlby, J. (1979). *The making and breaking of affectional bonds*. London: Tavistock Publications Limited.

Brannen, J., (2017). Mixing Methods: Qualitative and Quantitative Research. Abindgdon: Routledge.

Brassard, A. &. Johnson, S. (2016). Couple and family therapy: An attachment perspective. In J. Cassidy & P. Shaver (Eds.), *Handbook of Attachment: Theory, Research and Clinical Applications* (3rd Ed.) (pp. 805-823). New York: The Guilford Press.

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77-101.

Brown, K. (2018). *Education, culture and critical thinking*. Abingdon: Routledge.

Brooks, C. & Tsolacos, S. (2010). *Real estate modelling and forecasting*. Cambridge, UK: Cambridge University Press.

Bryant, J., Comisky, P., Crane, J. & Zillmann, D. (1980). Relationship between college teachers' use of humor in the classroom and students' evaluations of their teachers. *Journal of Educational Psychology*, *72*(4), 511-519. doi:10.1037/0022-0663.72.4.511.

Burge, L. (2008). Learning in computer conferenced contexts: The learners' perspective. *International Journal of e-LL & Distance Education*, *9*(1), 19-43.

Byram, M. (2008). From foreign language education to education for intercultural citizenship: Essays and reflections. *Multilingual Matters, 17,* 44-234.

Cambridge English Dictionary (2020). Online edition. Retrieved from https://dictionary.cambridge.org/ (18 January 2020).

Carliner, S. (2004). An overview of online learning (2nd Ed.). Armherst, MA: Human Resource Development Press.

Carroll, B. & Ahuvia, A. (2006). Some antecedents and outcomes of brand love. *Marketing Letters*, *17*(2), 79-89.

Cassidy, J. (2016). The nature of the child's ties. In J. Cassidy & P. Shaver (Eds.), *Handbook of Attachment: Theory, research and clinical applications* (3rd ed.) (pp. 3-24). New York: The Guilford Press.

Castelfranchi, C., & Falcone, R. (2010). *Trust theory: A socio-cognitive and computational* model (Vol. 18). New York: John Wiley & Sons.

Chapelle, C. (2001). *Computer applications in second language acquisition*. Cambridge: Cambridge University Press.

Chen, C. & Lee, T. (2011). Emotion recognition and communication for reducing second-language speaking anxiety in a web-based one-to-one synchronous learning environment. *British Journal of Educational Technology, 42*(3), 417-440. doi:10.1111/j.1467-8535.2009.01035.x.

Chomsky, N. (1986). *Knowledge of language: Its nature, origin, and use*. London: Greenwood Publishing Group. Retrieved from http://www.thatmarcusfamily.org/philosophy/Course_Websites/Readings/Chomsky%20-%20Knowledge%20of%20Language.pdf.

Chomsky, N. (2000). *New horizons in I of language and mind*. Cambridge: Cambridge University Press.

Clark, H. & Schaefer, E. (1989). Contributing to discourse. *Cognitive Science*, *13*(2), 259-294.

Cleveland-Innes, M. & Campbell, P. (2012). Emotional Presence, learning, and the online learning environment. *International Review of Research in Open and Distributed Learning, 13*(4), 269-292, doi:10.19173/irrodl.v13i4.1234.

Cleveland-Innes, M. & Wilton, D. (2018). *Guide to blended learning*. Burnaby, Canada: Commonwealth of Learning. Retrieved from http://oasis.col.org/handle/11599/3095

Cole, M. & Engeström, Y. (1993). A cultural-historical approach to distributed cognition. In G. Solomon (Ed.), *Distributed cognitions: Psychological and educational considerations* (pp.1-46). Cambridge: Cambridge University Press.

Coleman J. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, *1*(94), 95-120.

Compeau, D., Higgins, C. & Huff, S. (1999). Social cognitive theory and individual reactions to computing technology: A longitudinal study. *MIS Quarterly*, *23*(2), 145-158. doi:10.2307/249749.

Conrad, D. (2002). Deep in the hearts of learners: Insights into the nature of online community. Journal of Distance Education, *17*(1), 1−19.

Cook, C., Coco, S., Zhang, Y., Fiat, A., Duong, M., Renshaw, T., Long, A. & Frank, S. (2018). Cultivating positive teacher–student relationships: Preliminary evaluation of the Establish–Maintain–Restore (EMR) method. *School Psychology Review*, *47*(3), 226-243.

Coughlan, P. & Duff, P. (1994). Same task, different activities: Analysis of a SLA task from an Activity Theory perspective. In J. P. Lantolf & G. Appel (Eds.), Vygotskian approaches to second language research (pp. 173–193). Norwood, NJ: Ablex.

Creanor, L., Trinder, K., Gowan, D., & Howells, C. (2008). Life, learning and technology: views from the learners. *Learning and Teaching in Higher Education*, (2), 26-41.

Cressie, N., Calder, C., Clark, J., Hoef, J. M. V., & Wikle, C. K. (2009). Accounting for uncertainty in ecological analysis: the strengths and limitations of hierarchical statistical modelling. *Ecological Applications*, *19*(3), 553-570.

Creswell, J. (2009). Research design: Qualitative, quantitative, and mixed methods (3rd Ed.) Thousand Oaks: Sage.

Creswell, J. (2013) Qualitative inquiry and research design: choosing among the five methods. Thousand Oaks: Sage.

Creswell, J., & Clark, V. (2017). *Designing and conducting mixed methods research*. Thousand Oaks: Sage.

Crosthwaite, P., Storch, N. & Schweinberger, M. (2020). Less is more? The impact of written corrective feedback on corpus assisted L2 error resolution. *Journal of Second Language Writing*, online ahead of print. https://doi.org/10.1016/j.jslw.2020.100729. Author's manuscript.

Csikszentimihalyi, M. (1991). *Flow: The psychology of optimal experience*. New York: Harper Collins.

Curren, R. (1998). Philosophy of education. *The Routledge Encyclopaedia of Philosophy*. Abingdon: Taylor and Francis. doi:10.4324/9780415249126-N015-.

Currie, D. (2005). *Developing and applying study skills*. London: Chartered Institute of Personnel and Development.

Dawkins, R. (1998). Postmodernism disrobed. *Nature* 39, 41–143.

Damasio, A. (2003). *Looking for Spinoza: Joy, sorrow, and the feeling brain*. San Diego: Houghton Mifflin Harcourt.

De Bruyn, L. (2004). Monitoring online communication: can the development of convergence and Social Presence indicate an interactive learning environment? *Distance Education*, *25*(1), 67-81.

DeKeyser, R. (1998). Beyond focus on form: Cognitive perspectives on learning and practicing second language grammar. In C. Doughty & J. Williams (Eds.), Focus on form in classroom second language acquisition (pp. 42-63). New York: Cambridge University Press.

Delacre, M., Lakens, D., & Leys, C. (2017). Why psychologists should by default use Welch's t-test Instead of Student's t-test (in press for the *International Review of Social Psychology*) (pp.1-24), doi:10.31219/osf.io/sbp6k.

Dewaele, J. M. (2010). Multilingualism and affordances: Variation in self-perceived communicative competence and communicative anxiety in French L1, L2, L3 and L4. *International Review of Applied Linguistics in Language Teaching*, 48(2-3), 105-129.

Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process.* Boston, MA: D.C. Heath & Co Publishers.

Dewey, J. (1938). *Experience and Education*. Toronto: Collier-MacMillan.

Department for Education, (2015). *Special Educational Needs and Disability Code of Practice: 0 to 25 years.* London, Department for Education. Retrieved from https://www.gov.uk/government/publications/send-code-of-practice-0-to-25 (24/09/19)

de Winter, J. & Dodou, D. (2010). Five-point Likert items: t test versus Mann-Whitney-Wilcoxon, *Practical Assessment, Research and Evaluation*, *15*(11).

Didau, D. & Rose, N. (2016). *What every teacher needs to know about psychology*. Woodbridge: John Catt Educational.

Dillenbourg, P., Poirier, C. & Carles, L. (2003). Communautés virtuelles d'apprentissage: e-jargon ou nouveau paradigme. *A. Taurisson et A. Sentini. Pédagogies. Net. Montréal: Presses*, 11-47.

Doosje, S., De Goede, M., Van Doornen, L. & Goldstein, J. (2010). Measurement of occupational humorous coping. *Humor*, *23*(3), 275-305 doi: 10.1515/humr.2010.013.

Donato, R. (1994). Collective scaffolding in second language learning. In J.P. Lantolf & G. Appel (Eds.) *Vygotskian approaches to second language research* (pp. 33-56). Westport, CT: Ablex Publishing.

Donato, R. (2000). Sociocultural contributions to understanding the foreign and second language classroom. In J.P. Lantolf (Ed.). *Sociocultural theory and second language learning* (pp. 27-50). Oxford: Oxford University Press.

Dörnyei, Z. (1998). Motivation in second and foreign language learning. *Language teaching*, *31*(03), 117-135. doi:10.1017/S026144480001315X

Dörnyei, Z. (2007) *Research methods in applied linguistics*, Oxford: Oxford University Press

Dörnyei, Z. (2009b). The L2 motivational self-system. In Z. Dörnyei & E. Ushioda (Eds.), *Motivation, language identity and the L2 self* (pp. 9–42). Bristol, UK: Multilingual Matters.

Dörnyei, Z. (2020). Innovations and challenges in language learning motivation. London: Routledge.

Downes, S. (2010). New technology supporting informal learning. *Journal of Emerging Technologies in Web Intelligence*, *2*(1), 27-33

Drigotas, S. & Rusbult, C. E. (1992). Should I stay or should I go? A dependence model of breakups. *Journal of Personality and Social Psychology*, *62*(1), 62 -87. doi:10.1037/0022-3514.62.1.62

Dunlapa, J., Boseb, D., Lowenthal York, C. Atkinsonb, M. & Murtaghb, J. (2016). What sunshine is to flowers: a literature review on the use of emoticons to support online learning? In S. Tettegah & M. Gartmeier (Eds.). *Emotions, technology, design, and learning* (pp.163-182), London: Academic Press. https://doi.org/10.1016/B978-0-12-801856-9.00001-3.

Dunn, L. & Hoegg, J. (2014). The impact of fear on emotional brand attachment. *Journal of Consumer Research*, *41*(1), 152-168. doi:10.1086/675377

Duphorne, P. & Gunawardena, C. N. (2005). The effect of three computer conferencing designs on critical thinking skills of nursing students. *The American Journal of Distance Education*, *19*(1), 37-50.

Dweck, C., 2006. The truth about ability and accomplishment. *Mindset: The new psychology of success.* New York: Ballantine Books.

Edwards, D. (2019). Systematic case study research in clinical and counselling psychology. In, S. Laher, A. Fynn & S. Kramer (Eds.), *Transforming research methods in the social*

sciences: Case studies from South Africa (pp. 151-168). Johannesburg: Wits University Press.

Ellis, R. (2005). Principles of instructed language learning. *System*, *33*(2), 209-224. doi:10.1016/j.system.2004.12.006.

Ellis, R. (2017). Position paper: Moving task-based language teaching forward. *Language Teaching*, 50(4), 507-526. doi:10.1017/S0261444817000179

Ellis, R., Skehan, P., Li, S., Shintani, N. & Lambert, C. (2019). *Task-based language teaching: theory and practice* (Cambridge Applied Linguistics). Cambridge: Cambridge University Press. doi:10.1017/9781108643689

Engeström, Y. (1987). Learning by expanding: An activity-theoretical approach to developmental research. Helsinki, Finland, Orienta-Konsultit.

Epstein, L. (2013). Get better data and simplify analysis: Qualitative vs. quantitative questions. Retrieved from www.surveymonkey.com/blog/en/blog/2013/04/10/qualitative-vs-quantative

Etzioni, A. (1961). A comparative analysis of complex organizations: On power, involvement, and their correlates. New York: Free Press.

Fedorikhin, A., Park, C. & Thomson, M. (2008). Beyond fit and attitude: The effect of emotional attachment on consumer responses to brand extensions. *Journal of Consumer Psychology*, *18*(4), 281-291. doi:10.1016/j.jcps.2008.09.006.

Feeney, J., & Noller, P. (1990). Attachment style as a predictor of adult romantic relationships. *Journal of personality and Social Psychology*, *58*(2), 281.

Feeney, J., & Noller, P. (1996). *Adult attachment*. Newbury Park: Sage Publications.

Felder, R. (2002). Author's preface to learning and teaching styles. *Engineering Education*, *78*(7), 674-681.

Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford: Stanford University Press.

Fillmore, C. (2003). Double-decker definitions: The role of frames in meaning explanations. *Sign Language Studies*, *3*(3), 263-295.

Fielding, J. & Gilbert, N. (2006), *Understanding social statistics* (2nd ed.). Thousand Oaks: Sage.

Florian, L. (2010). Special education in an era of inclusion: the end of special education or a new beginning? *The Psychology of Education Review*, *34*(2), 22-27.

Fournier, S. (1998). Consumers and their brands: Developing relationship theory in consumer research. *Journal of Consumer Research*, *24*(4), 343-373.

Fraley, C., Niedenthal, P., Marks, M., Brumbaugh, C., & Vicary, A. (2006). Adult attachment and the perception of emotional expressions: Probing the hyperactivating strategies underlying anxious attachment. *Journal of Personality*, *74*(4), 1163-1190.

Fredricks, J., Blumenfeld, P. & Paris, A. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, *74*(1), 59–109. https://doi.org/10.3102/00346543074001059

Fussell, S. (2002). The verbal communication of emotion: Introduction and overview, in S. Fussell (Ed.), *The verbal communication of emotions: interdisciplinary perspectives*. Mahwah: Lawrence Erlbaum Associates.

Garbarino, E. & Johnson, M. (1999). The different roles of satisfaction, trust, and commitment in customer relationships. *Journal of Marketing*, *63*(2), 70-87. doi:10.2307/1251946.

Gardner, R. (1988). Attitudes and motivation. *Annual Review of Applied Linguistics*, 9, 135–148.

Garner, R. (2006). Humour in pedagogy: How ha-ha can lead to aha! *College Teaching*, *54*(1), 177-180.

Garrett, P. & Baquedano-López, P. (2002). Language socialization: Reproduction and continuity, transformation and change. *Annual Review of Anthropology*, *31*, 339-361.

Garrison, D. & Baynton, M. (1987). Concepts: Beyond independence in distance education: The concept of control. *American journal of distance education*, *1*(3), 3-15.

Garrison, D., Anderson, T. & Archer, W. (1999). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, *2*(2-3), 87-105. doi:10.1016/S1096-7516(00)00016-6

Garrison, D., Anderson, T. & Archer, W. (2000). Critical inquiry in a text-based environment: computer conferencing in higher education. *The Internet and Higher Education 2*(2), 87-105.

Garrison, D. & Archer, W. (2000). *A transactional perspective on teaching and learning: a framework for adult and higher education*. Advances in learning and instruction series. New York: Elsevier Science.

Garrison, D. Anderson, T. & Archer, W. (2001). Critical thinking, Cognitive Presence, and computer conferencing in distance education. *American Journal of distance education*, *15*(1), 7-23. doi:.org/10.1080/08923640109527071.

Garrison, D. & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The Internet and Higher Education, 7*(2), 95-105.

Garrison, D. & Cleveland-Innes, M. (2005). Facilitating Cognitive Presence in online learning: Interaction is not enough. *The American Journal of Distance Education*, *19*(3), 133-148. doi:10.1207/s15389286ajde1903_2

Garrison, D. (2006). Online collaboration principles. *Journal of Asynchronous Learning Networks*, *10*(1), 25-34.

Garrison, D. & Arbaugh, J. (2007). Researching the community of inquiry framework: Review, issues, and future directions. *The Internet and Higher Education*, *10*(3), 157-172. doi:10.1016/j.iheduc.2007.04.001.

Garrison, D. (2007). Online community of inquiry review: Social, cognitive, and Teaching Presence issues. *Journal of Asynchronous Learning Networks*, *11*(1), 61-72

Garrison, D. (2012). Article review-Social Presence within the community of inquiry framework. *The International Review of Research in Open and Distributed Learning*, *13*(1), 250-253.

Gelso, C., Palma, B. & Bhatia, A. (2013). Attachment theory as a guide to understanding and working with transference and the real relationship in psychotherapy. *Journal of Clinical Psychology*, 69, 1160–1171. doi:10.1002/jclp.22043

Gillath, O., Karantzas, G. & Fraley, R. (2016). *Attachment: A concise introduction to theory and research*. Amsterdam: Academic Press.

Glaser, B. & Strauss, A. (2009). The discovery of Grounded Theory: Strategies for qualitative research. New York: Transaction Publishers.

Gilmore, A. (2007). Authentic materials and authenticity in foreign language learning. *Language teaching*, *40*(2), 97-118.

Goswami, U. & Ziegler, J. (2006). A developmental perspective on the neural code for written words. *Trends in Cognitive Sciences*, *10*(4), 142-143 doi:10.1016/j.tics.2006.02.006.

Graham, C. (2006). Blended learning systems. In, C J. Bonk & C. R. Graham (Eds.) *The handbook of blended learning, Global perspectives, local designs*. San Francisco: Pfeiffer Publishing.

Graesser, A., Baer, W., Feng, S., Walker, B., Clewley, D., Hays, D., & Greenberg, D. (2016). Emotions in adaptive computer technologies for adults improving reading. In, S. Tettegah & M. Gartmeier (Eds.). *Emotions, technology, design, and learning* (pp. 3-25.) London: Academic Press. https://doi.org/10.1016/B978-0-12-801856-9.00001-3.

Greene, J., Caracelli, V., & Graham, W. (1989). Toward a conceptual framework for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis*, *11*(3), 255-274.

Green, A. (2014). *Exploring language assessment and testing: Language in action*. London & New York: Routledge.

Grisaffe, D. & Nguyen, H. (2011). Antecedents of emotional attachment to brand. *Journal of Business Research*, 64(10): 1052-1059. doi:10.1016/j.jbusres.2010.11.002

Grossman, P., Wineburg, S. & Woolworth, S. (2001). Toward a theory of teacher community. *The Teachers College Record*, *103*, 942-1012.

Guba, E. & Lincoln, Y. (1994). Competing paradigms in qualitative research. In N. Denzin & Y. Lincoln (Eds.), *Handbook of Qualitative Research* (2rd ed). (pp. 163-194), Thousand Oaks: Sage.

Guba, E. & Lincoln, Y. (1994). Paradigm controversies, contradictions and emerging confluences in qualitative research. In N. Denzin & Y. Lincoln (Eds.), *Handbook of Qualitative Research* (3rd ed). (pp. 191-216). Thousand Oaks: Sage.

Gunawardena, C., Wilson, P. & Nolla, A. (2003). Culture and online education. In M. Moore & W. Anderson (Eds.), *Handbook of distance education*, pp. 753-775. Mahwah, New Jersey: Lawrence Erlbaum Associates.

Hakim, C. (2012). Research design: Successful designs for social economics research. London: Routledge.

Hames-Garcia, M. (2011). *Identity complex: Making the case for multiplicity*. Minneapolis: University of Minnesota Press.

Hammond, J., & Gibbons, P. (2005). What is scaffolding. *Teachers' Voices*, *8*, 8-16.

Hannibal Jensen, S. (2017) Gaming as an English language learning resource among young children in Denmark. *CALICO Journal*, 34(1), 1–19.

Hannibal Jensen, H. (2019). Language learning in the wild: A young user perspective. *Language Learning & Technology*, 23(1),72–86. https://doi.org/10125/44673

Hardin, R. (1996). Trustworthiness. *Ethics*, *107*(1), 26-42.

Hargreaves, A. (2000). Mixed emotions: Teachers' perceptions of their interactions with students. *Teaching and teacher education*, *16*(8), 811-826

Hart, S. (2012). Siblings and peers in the adult–child–child triadic context. *A developmental environmental measurement handbook*, 284-299, Cambridge: Cambridge University Press

Hattie, J. (2008). Visible learning: A synthesis of over 800 meta-analyses relating to achievement. Abingdon: Routledge.

Hattie, J. (2012). Visible learning for teachers: Maximizing impact on learning. Abingdon: Routedge.

Hauske, S. & Bendel, O. (2007), Informelles E-Learning. Retrieved from http:// www.informelles -lernen.de/fileadmin/ d ateien/ Informelles_ Lernen/ Texte/ Hauske_Bendel_2007.pdf

Hays, R. (1988). Friendship. In S. Duck, D. Hay, S. Hobfoll, W. Ickes, & B. Montgomery (Eds.), *Handbook of personal relationships: Theory, research and interventions* 391–408, NY: John Wiley & Sons.

Heath, S. (1983). Ways with words: Language, life and work in communities and classrooms. Cambridge: Cambridge University Press

Heckman, R. & Annabi, H. (2005). A content analytic comparison of learning processes in online and face-to-face case study discussions. *Journal of Computer-Mediated Communication*, *10*(2). doi:10.1111/j.1083-6101.2005.tb00244.x.

Heigham, J. & Croker, R. (2009). *Qualitative research in applied linguistics: A practical introduction.* Basingstoke, Palgrave Macmillan.

Heller, M. & Martin-Jones, M. (Eds.). (2001). *Voices of authority: Education and linguistic difference.* Contemporary Studies in Linguistics and Education. London: Greenwood Publishing Group.

Henri, F. & Lundgren-Cayrol, K. (2001). *Apprentissage collaboratif à distance (Collaborative distance learning)*, 7-178, Quebec: Presses de l'Université du Québec

Hillman, D. C., Willis, D. J., & Gunawardena, C. N. (1994). Learner-interface interaction in distance education: An extension of contemporary draft framework s and strategies for practitioners. *American Journal of Distance Education*, *8*(2), 30-42. doi: 10.1080/08923649409526853.

Hill, J., & Miller, K. B. (2013). Classroom instruction that works with English language learners. ASCD.

Howe, D. (2006). Developmental attachment psychotherapy with fostered and adopted children. *Child and Adolescent Mental Health*, 11(3), 128-134.

Hrastinski, S. (2008). Asynchronous and synchronous e-learning. *Educause Quarterly*, *31*(4), 51-55.

Hrastinski, S., Keller, C. & Carlsson, S. (2010). Design exemplars for synchronous e-learning: A design theory approach. *Computers & Education*, *55*(2), 652-662, doi:10.1016/j.compedu.2010.02.025

Hughes, M., Ventura, S. & Dando, M. (2007). Assessing Social Presence in online discussion groups: A replication study. *Innovations in Education and Teaching International*, *44*(1), 17-29.

Huitt, W. (2007). Success in the conceptual age: Another paradigm shift*, 32nd Annual Meeting of the Georgia Educational Research Association*, Savannah, GA. Retrieved from http://www.edpsycinteractive.org/papers/conceptual-age.pdf

Huitt, W. (2009). A systems approach to I of human behaviour. *Educational Psychology Interactive*. Valdosta, GA: Valdosta State University. Retrieved from http://www.edpsycinteractive.org/materials/sysmdlo.html.

Husserl, E. (1913). Ideen zu einer reinen phänomenologie und phänomenologischen philosophie. Erstes Buch: Allgemeine Einführung in die reine Phänomenologie

Ishihara, N. & Cohen, A. (2014). Teaching and learning pragmatics: where language and culture meet. Abingdon: Routledge.

Immordino-Yang, M. (2018). Embodied brains, social minds, cultural meaning: Why emotions are fundamental to learning. *International conference on thinking 2018*, Florida. Doi:10.3102/0002831216669780.

Jack, G. (2000). Ecological influences on parenting and child development. *British Journal of Social Work*, *30*(6), 703-720. doi:10.1093/bjsw/30.6.703.

Jamieson, S. (2004). Likert scales: how to (ab)use them. *Medical Education 38*(12), 1217–1218.

Jang, H., Reeve, J. & Deci, E. (2010). Engaging students in learning activities: It is not autonomy support or structure but autonomy support and structure. *Journal of Educational Psychology, 102*(3), 588–600. https://doi.org/10.1037/a0019682

Järvelä, S., Volet, S. & Järvenoja, H. (2010). Research on motivation in collaborative learning: Moving beyond the cognitive–situative divide and combining individual and social processes. *Educational Psychologist*, *45*(1), 15-27. doi.org/10.1080/00461520903433539

Johnson, M. D., Herrmann, A., & Huber, F. (2006). The evolution of loyalty intentions. *Journal of Marketing*, *70*(2), 122-132.

Joinson, A., Reips, U., Buchanan, T. & Schofield, C. (2010). Privacy, trust, and self-disclosure online. *Human–Computer Interaction*, *25*(1), 1-24. doi:10.1080/07370020903586662

Kahu, E., Stephens, C., Leach, L. & Zepke, N. (2015). Linking academic emotions and student engagement: Mature-aged distance students' transition to university. *Journal of Further and Higher Education*, *39*(4), 481-497. doi.org/10.1080/0309877X.2014.895305

Katz, J. (1983). Theory of qualitative methodology: the social system of analytical framework in R. Edison (Ed.) *Contemporary Field Research*. Illinois: Waveland Press

Kaye, A. (1992). Learning together apart. In *Collaborative learning through computer conferencing* (pp. 1-24). Berlin, Heidelberg: Springer.

Kwet, M. (2019). Digital colonialism: US empire and the new imperialism in the Global South. *Race & Class*, *60*(4), 3–26. https://doi.org/10.1177/0306396818823172

Khodyakov, D. (2007). Trust as a process: A three-dimensional approach. *Sociology*, *41*(1), 115-132.

King, A. (1993) From sage on the stage to guide on the side, *College Teaching*, *41*(1), 30-35, doi: 10.1080/87567555.1993.9926781

Knowles, M. (1973). *The adult learner: a neglected species. (*2nd ed.). Houston: Gulf Publishing.

Knowles, M. (1990). *The adult learner: a neglected species. (*4th ed.). Houston: Gulf Publishing.

Kobak, R., Zajac, K. & Madsen.S. (2016). Attachment disruptions, reparative processes and psychopathology: Theoretical and clinical implications. In J. Cassidy & P. Shaver (Eds.), *Handbook of Attachment: Theory, research and clinical applications* (3rd Ed.) (pp 25-39). New York: The Guilford Press.

Kolb, D. (1984). Experiential Learning: experience as the source of learning and development. Englewood Cliffs: Prentice Hall Inc.

Krashen, S. (1982). *Principles and practice in second language learning*. New York: Pengamon.

Krashen, S. (2003). *Explorations in Language Acquisition and Use*. Portsmouth, NH: Heinemann.

Krashen, S. (2013). Rosetta Stone: Does not provide compelling input, research reports at best suggestive, conflicting reports on users' attitudes. *International Journal of Foreign Language Teaching*, *8*(1), 2014, 1-5.

Krathwohl, D. (2002). A revision of Bloom's taxonomy: An overview. *Theory into practice,* 41(4), 212-218. doi: 10.1207/s15430421tip4104_2.

Lai, C. (2017). Aut*onomous language learning with technology: Beyond the classroom.* London: Bloomsbury Publishing.

Laslett, R. & Smith, C. (2002). *Effective classroom management*: *A teacher's guide*. London: New York: Routledge,1-29.

LaTour, M. & Rotfeld, H. (1997). There are threats and (maybe) fear-caused arousal: Theory and confusions of appeals to fear and fear arousal itself. *Journal of Advertising*, *26*(3), 45-59.

Lantolf, J. (2000). *Sociocultural theory and second language learning*. Oxford: Oxford University Press.

Lantolf, J. & Pavlenko, A. (2001). (S)econd (L)anguage (A)ctivity theory: Understanding second language learners as people. In M. P. Breen (Ed.), *Learner contributions to language learning*: New directions in research (pp. 141–158). Abingdon: Pearson.

Lantolf, J.m& Genung, P. (2002). "I'd rather switch than fight": An activity-theoretic study of power, success, and failure in aforeign language classroom. In C. Kramsch (Ed.), Language acquisition and language socialization: Ecological perspectives (pp. 175–196). New York, NY: Continuum.

Lantolf, J. & Thorne, S. (2006). *Sociocultural theory and the genesis of second language development*. Oxford: Oxford University Press.

Lantolf, J., & Thorne, S. (2007). Sociocultural theory and second language learning. In B. Van Patten & J. Williams (Eds.) *Theories in second language acquisition* (pp. 201–224). Mahwah, NJ: Lawrence Erlbaum.

Lawler, E., Thye, S. & Yoon, J. (2000). Emotion and group cohesion in productive exchange. *American Journal of Sociology*, *106*(3), 616-657.

Lee, J. (2019). Quantity and diversity of informal digital learning of English. *Language Learning & Technology*, 23(1), 114–126. https://doi.org/10125/44675

Leather, J. & Van Dam, J. (2002). Towards an ecology of language acquisition. In *Ecology of language acquisition* (pp. 1-29). Springer, Dordrecht: Kluwer Academic Publishers

Lee, J. (2019). Quantity and diversity of informal digital learning of English. *Language Learning & Technology*, 23(1), 114–126. https://doi.org/10125/44675

Leek, J., McShane, B., Gelman, A., Colquhoun, D., Nuijten, M. & Goodman, S. (2017). Five ways to fix statistics. *Nature*, *551*, 557-8. doi: 10.1038/d41586-017-07522-z.

Leontev A. (1978). *Activity, consciousness, and personality*. London, Prentice Hall.

Leutner, D. (2014). Motivation and emotion as mediators in multimedia learning. *Learning and Instruction*, *29*, 174-175. doi:10.1016/j.learninstruc.2013.05.004.

Levin, D., Raghav, A., Shtiegman, E. & Samdadiya, P. (2005). *U.S. Patent Application No. 11/195,375.*

Libbey, H. (2004). Measuring student relationships to school: Attachment, bonding, connectedness, and engagement. *Journal of School Health*, *74*(7), 274-283.doi: 10.1111/j.1746-1561.2004.tb08284.x.

Lipman, M. (2003). Thinking in education. Cambridge: Cambridge University Press.

Livingstone, D. (1999). *Exploring the icebergs of adult learning: findings of the first Canadian survey of informal learning practices*. Social Sciences and Humanities Research Council of Canada, Ottawa (Ontario). *The Canadian Journal for I of Adult Education*, 13(2), 49.

Livingstone, D. (2001). Adults' informal learning (Report No. NALL Working Paper #21-2001). Toronto: New Approaches to Lifelong Learning, Ontario Institute for Studies in Education, University of Toronto.

Livingstone, D., Raykov, M. & Stowe, S. (2001). Interest in factors related to participation in adult education and informal learning. Ottawa, ON: Applied Research Branch Strategic Policy, Human Resources Development Canada.

Locke, L., Silverman, S. & Spirduso, W. (2009). *Reading and understanding research*. Newbury Park, California: Sage Publications.

Lompscher, J. (1999). Motivation and activity. *European Journal of Psychology of Education*, *14*(1), 11–22.

Lock, J. & Redmond, P. (2019). Secondary pre-service teachers: Exploration of inclusive education. In A. Lopez & E. Olan (Eds.) *Transformative pedagogies for teacher education: critical action, agency and dialogue in teaching and learning contexts* (pp. 37-54). Toronto: University of Toronto Press.

Lou, S., Shih, R., Tseng, K., Diez, C. & Tsai, H. (2010). How to promote knowledge transfer through a problem-based learning Internet platform for vocational high school students. *European Journal of Engineering Education*, *35*(5), 539-551. doi:10.1080/03043797.2010.489938.

Lowenthal, P., Wilson, B. G., & Parrish, P. (2009). Context matters: A description and typology of the online learning landscape. AECT International Convention, Louisville, KY. Presented at the 2009 AECT International Convention, Louisville, KY.

Luskin, B. (2010). Think "Exciting": E-learning and the Big "E". *Educause Review Online Quarterly*, *33*(1).

Luthans, F., Youssef, C. & Aviolo, B. (2007). *Psychological capital: developing the human competitive edge*. New York: Oxford University Press Inc.

Macey, W., & Schneider, B. (2008). Engaged in engagement: We are delighted we did it. Industrial and Organizational Psychology, 1(1), 76-83.

MacIntyre, P. (2002). Motivation, anxiety and emotion in second language acquisition. Individual differences and instructed language learning, 2, 45-68.

MacIntyre, P. (2007). Willingness to communicate in the second language: Understanding the decision to speak as a volitional process. *The Modern Language Journal*, 91(4), 564-576.

Majeski, R., Stover, M. & Valais, T. (2018). The Community of Inquiry and Emotional Presence. *Adult Learning*, *29*(2), 53–61. https://doi.org/10.1177/1045159518758696

Malär, L., Krohmer, H., Hoyer, W. & Nyffenegger, B. (2011). Emotional brand attachment and brand personality: The relative importance of the actual and the ideal self. *Journal of Marketing*, *75*(4), 35-52. doi:10.1509/jmkg.75.4.35

Marsick, V. & Watkins, K. (2001). Informal and incidental learning. In S. Merriam (Ed.), The new update on adult learning theory (pp. 25–34). San Francisco: Jossey-Bass.

Martín-Monje, E., Castrillo, M. & Mañana-Rodríguez, J. (2018). Understanding online interaction in language MOOCs through learning analytics. *Computer Assisted Language Learning*, *31*(3), 251-272. doi:10.1080/09588221.2017.1378237

Maxwell, J. A. (2012). *Qualitative research design: An interactive approach* (Vol. 41). Newbury Park, California: Sage Publications.

McGregor, D. & Cartwright, L. (2011). Developing reflective practice: a guide for beginning teachers: a guide for beginning teachers. New York: McGraw-Hill Education.

McCafferty, S., Roebuck, R. & Wayland, R. (2001). Activity theory and the incidental learning of second-language vocabulary. *Language Awareness*, *10*(4), 289–294.

McCarthy, J., Wright, P., Wallace, J. & Dearden, A. (2006). The experience of enchantment in human–computer interaction. *Personal and Ubiquitous Computing*, *10*(6), 369-378. doi: 10.1007/s00779-005-0055-2.

McElroy-Heltzel, S., Jordan, T., Futris,T., Barton,A., Landor, A. & Sheats, K. (2019). Sources of socialization for interpersonal trust: an exploration of low-income Black adolescents' experiences. *Journal of Youth Studies, 22*(1), 124-137.doi.org/10.1080/13676261.2018.1492099.

Mercer, S., & Dörnyei, Z. (2020). *Engaging language learners in contemporary classrooms*. Cambridge: Cambridge University Press.

Merriam, S. (2001). Andragogy and self-directed learning: Pillars of adult learning theory. *New Directions for Adult and Continuing Education*, *2001*(89), 3-14.

Meyerbröker, K. & Emmelkamp, P. (2010). Virtual reality exposure therapy in anxiety disorders: a systematic review of process-and-outcome studies. *Depression and Anxiety*, 27(10), 933-944.doi:10.1002/da.20734.

Mikulincer, M. (1998). Attachment working models and the sense of trust: An exploration of interaction goals and affect regulation. *Journal of Personality and Social Psychology, 74*(5), 1209–1224. doi.org/10.1037/0022-3514.74.5.1209

Mikulincer, M. & Shaver, P. 2019). Attachment orientations and emotion regulation. *Current Opinion in Psychology, 25*, 6-10. doi.org/10.1016/j.copsyc.2018.02.006.

Miles, M. & Huberman, A. (1994). *Qualitative data analysis: an expanded sourcebook*. Thousand Oaks: Sage.

Mills, B. (2020). *Boys studying modern foreign languages at GCSE in schools in England*, London: British Council, Education Policy Institute.

Mitchell, A., & Olson, J. (1981). Are product attribute beliefs the only mediator of advertising effects on brand attitude? *Journal of marketing research*, *18*(3), 318-332.

Mitchell, R., Myles, F., & Marsden, E. (2013). *Second language learning theories*. Abingdon: Routledge.

Mok, N. (2017). On the concept of perezhivanie: a quest for a critical review, pp. 19-45 in *Perezhivanie, Emotions and subjectivity: advancing Vygotsky's legacy*, in M. Fleer, F. González Rey & N. Veresov (Eds.). New York: Springer.

Moore, M (1989). Three types of interaction. *American Journal of Distance Education*, *3*(2), 1–7. doi: 10.1080/08923648909526659.

Moore, M. (1993). Theory of transactional distance. In D. Keegan (Ed.) *Theoretical Principles of Distance Education*. New York: Routledge.

Moore, A. (2004). *The good teacher: Dominant discourses in teacher education*. Abingdon: Routledge.

Moore, M. G., & Kearsley, G. (2005). *Distance education: A system view* (2nd Ed.), Belmont, CA: Thomson Wadsworth.

Montessori, M. (1909). *Metodo della gia scientifica applicato all'educazione infantile nelle case dei bambini* (1st Ed.). Rome: Cita Di Castello.

Morgan, R. & Hunt, S. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, *58*(3), 20-38. doi:10.2307/1252308.

Morgan, G. (2001). Thirteen "must ask" questions about e-learning products and services. *The Learning Organization*, *8*(5), 203-211. doi:10.1108/eum0000000005914.

Morgan, D. L. (2007). Paradigms lost and pragmatism regained: methodological implications of combining qualitative and quantitative methods. *Journal of Mixed Methods Research*, *1*(1), 48-76. doi:10.1177/2345678906292462.

Murnieks, C., Cardon S. & Haynie,M., (2020). Fuelling the fire: Examining identity centrality, affective interpersonal commitment and gender as drivers of entrepreneurial passion. *Journal of Business Venturing 35*(1),1-17. doi:10.1016/j.jbusvent.2018.10.007

Neubert, A. (2000). Competence in language, in languages and in translation. In C. Schäffner & B. Adab (Eds.) *Developing translation competence* (pp. 3-18). Amsterdam: John Benjamin's Publishing Company.

Norman, G. (2010). Likert scales, levels of measurement and the "laws" of statistics. *Adv Health Science Education Theory & Practice, 15*(5), pp. 625–632. doi: 10.1007/s10459-010-9222-y.

Oblinger, D. & Oblinger, J. (2005). Educating the next generation. EDUCAUSE. Retrieved from. http://net.educause.edu/ir/library/pdf/pub7101.pdf

Ochs, E. & Schieffelin, B. (2009). Language acquisition and socialization: three developmental stories and their implications. In A. Duranti & R. LeVine (Eds.) *Linguistic Anthropology* (pp.276-320). Oxford: Blackwell Publishing.

OFSTED. (2011). Office for Standards in Education. *Modern languages: achievement and challenge 2007–2010*. London: HMSO. Retrieved from http://www.ofsted.gov.uk/Ofstedhome/Publications-and-research/Browse-all-by/Documents-by-type/Thematicreports/Modern-languages-achievement-and-challenge-2007-2010

Oliver, R. (1999). Whence consumer loyalty? *Journal of Marking*, *63*(4), 33-44. doi:10.1177/00222429990634s105.

Olsson, E., & Sylvén, L. (2015). Extramural English and academic vocabulary: A longitudinal study of CLIL and non-CLIL students in Sweden. *Journal of Applied Language Studies,9*(2), 77–103.

Page, A., Boyle, C., McKay, K & Mavropoulou, S. (2019). Teacher perceptions of inclusive education in the Cook Islands. *Asia-Pacific Journal of Teacher Education*, *47*(1), 81-94.doi.org/10.1080/1359866X.2018.1437119

Park, C., MacInnis, D. & Priester, J. (2006). Beyond attitudes: Attachment and consumer behavior. *Seoul National Journal, 12*(2)*, 3-36.*

Parks, E. (2013). *What's the "e" in e-LL*. Retrieved from http://www.askinternational.com/knowledge/articles/eBasic/whatsElearn.html.

Passyn, K. & Sujan, M. (2006). Self-accountability emotions and fear appeals: Motivating behavior. *Journal of Consumer Research*, *32*(4), 583-589.

Patton, M. Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health services research*, *34*(5 Pt 2), 1189 - 1208.

Pavlenko, A. (2001). In the world of the tradition, I was unimagined: Negotiation of identities in cross-cultural autobiographies. *International Journal of Bilingualism*, *5*(3), 317-344. doi:10.1177/13670069010050030401.

Pekrun, R. & Linnenbrink-Garcia, L. (2012). Academic emotions and student engagement. In *Handbook of Research on Student Engagement*, Boston, MA: Springer, 259-282. doi:10.1007/978-1-4614-2018-7_12.

Pendell, S. (2002). Affection in Interpersonal relationships: not just "a fond or tender feeling". *Annals of the International Communication Association*, *26*(1), 67-110. doi.org/10.1080/23808985.2002.11679011.

Peppard, J. (2000). Customer relationship management (CRM) in financial services. *European Management Journal*, *18*(3), 312-327.

Peters, A., & Boggs, S. (1986). Interactional routines as cultural influences upon language acquisition. *Language Socialization Across Cultures*. Cambridge: Cambridge University Press.

Pham, X. & Chen, G. (2019). PACARD: A new interface to increase mobile learning app engagement, distributed through app stores. *Journal of Educational Computing Research*, *57*(3), 618–645. https://doi.org/10.1177/0735633118756298

Pollard, A. (2002). *Readings for reflective teaching*. London: Continuum.

Popham, W.J., 2007. The lowdown on learning progressions. *Educational Leadership*, *64*(7), 83-84.

Posey, C., Lowry, P., Roberts, T. & Ellis, T. (2010). Proposing the online community self-disclosure model: the case of working professionals in France and the UK who use online communities. *European Journal of Information Systems*, *19*(2), 181-195. doi:10.1057/ejis.2010.15.

Powell, J., & Andresen, L. (1985). Humour and teaching in higher education. *Studies in Higher Education*, *10*(1), 79-90.

Preece, J., & Maloney-Krichmar, D. (2003). Online communities: focusing on sociability and usability. *Handbook of Human-Computer Interaction*, 596-620.

Putnam R. (2001). *Bowling alone: The collapse and revival of American community*. New York: Simon and Schuster.

Rallis, S. & Rossman, G. (2009). Ethics and Trustworthiness, in J. Heigham & R. Croker, (Eds). *Qualitative research in applied linguistics: A practical introduction,* pp. 263-287. Basingstoke: Palgrave Macmillan.

Redmond, P., & Lock, J. (2017). Do secondary pre-service teachers have what it takes to educate learners with special educational needs? In *Society for Information Technology & Teacher Education International Conference*, pp. 1051-1056. Association for the Advancement of Computing in Education (AACE).

Redmond, P. & Gutke, H. (2019). STEMming the flow: supporting females in STEM. *International Journal of Science and Mathematics Education*, *18*, 221–237. doi:10.1007/s10763-019-09963-6

Reich, R. (2010). *The work of nations: Preparing ourselves for 21st century capitalism* (2nd Ed.). New York: Vintage.

Reinders, H. & Benson, P. (2017). Research agenda: Language learning beyond the classroom. *Language Teaching*, *50*(4), 561-578. doi:10.1017/S0261444817000192

Rienties, B. & Rivers, B. A. (2014). Measuring and understanding learner emotions: Evidence and prospects. *Learning Analytics Review, 1*, 1-28. Retrieved from http://laceproject.eu/publications/learning-analytics-and-emotions.pdf

Reis, H. & Judd, C. (2014). *Handbook of Research methods in social and personality psychology*. Cambridge: Cambridge University Press.

Ritchie, J. & Lewis J. (2003). Qualitative research practice: a guide for social science students and researchers. Thousand Oaks: Sage.

Rogers, C. (1967). The interpersonal relationship in the facilitation of learning. In *Humanizing education*: *The person in the process*. Ed. T. Leeper. National Education Association, Association for Supervision and Curriculum Development, p1-18.

Rourke, L. & Kanuka, H. (2009). Learning in communities of inquiry: A review of the literature. *Journal of Distance Education*, *23*(1), 19-48.

Ryan, A., Gheen, M. & Midgley, C. (1998). Why do some students avoid asking for help? An examination of the interplay among students' academic efficacy, teachers' social–

emotional role, and the classroom goal structure. *Journal of Educational Psychology*, *90*(3), 528 – 535. doi.org/10.1037/0022-0663.90.3.528.

Ryan, R. & Deci, E. (2002). Overview of self-determination theory: An organismic-dialectical perspective. In E. Deci & R. Ryan (Eds.), Handbook of self-determination research (pp. 3–33). Rochester, NY: The University of Rochester Press.

Salkind, N. (2010). *Encyclopedia of research design*, (Vol. 1). Thousand Oaks: Sage.

Sanders, D. & McCutcheon, G. (1986). The development of practical theories of teaching. *Journal of Curriculum and Supervision, 2*(1), 50-67.

Sandholtz, J. (1997). *Teaching with technology: Creating student-centred classrooms.* New York, NY: Teachers College Press.

Scheff, T. (2011). Social-emotional world: Mapping a continent. *Current Sociology*, *59*(3), 347–361. doi:10.1177/0011392111400787.

Schieffelin, B. & Ochs, E. (1986). *Language socialization across cultures*. Cambridge: Cambridge University Press.

Schouten, J. & McAlexander, J. (1995). Subcultures of consumption: an ethnography of the new bikers, *Journal of Consumer Research*, *22*(1), 43–61. doi:10.1086/209434

Schugurensky, D. (2000). The forms of informal learning. Towards a conceptualization of the field. Working Paper 19-2000. Presented at the New Approaches for Lifelong Learning (NALL) Fourth Annual Conference, October 6-8**.** Retrieved from http://hdl.handle.net/1807/2733.

Sethi, S. & Seligman, M. (1993). Optimism and fundamentalism. *Psychological Science*, *4*(4), 256-259.

Shen, L., Wang, M. & Shen, R. (2009). Affective e-Learning: Using emotional data to improve learning in pervasive learning environment. *Journal of Educational Technology & Society*, *12*(2), 176-189.

Shorey, H., Snyder, C., Yang, X. & Lewin, M. (2003). The role of hope as a mediator in recollected parenting, adult attachment, and mental health. *Journal of Social and Clinical Psychology*, *22*(6), 685-715.

Shulman, L. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, *57*(1), 1-22. doi:10.17763/haer.57.1.j463w79r56455411

Siegel, S. & Castellan, N. (1998). Nonparametric statistics for the behavioural sciences. New York: McGraw-Hill Education.

Simpson, J. (1990). Influence of attachment styles on romantic relationships. *Journal of Personality and Social Psychology*, *59*(5), 971.

Singer, E., Von Thurn, D. & Miller, E. (1995). Confidentiality assurances and response: A quantitative review of the experimental literature. *Public Opinion Quarterly*, *59*(1), 66-77. doi: 10.1086/269458.

Smith, K. (1996). Cooperative learning: Making "groupwork" work. *New Directions for Teaching and Learning*, *1996*(67), 71-82.

So, H. (2009). When groups decide to use asynchronous online discussions: collaborative learning and Social Presence under a voluntary participation structure. *Journal of Computer Assisted Learning*, *25*(2), 143-160.

Stacey, E. (2007). Collaborative learning in an online environment. *International Journal of E-Learning & Distance Education/Revue internationale du e-learning et la formation à distance*, *14*(2), 14-33.

Stake, R. (1995). *The art of case study research*. Thousand Oaks: Sage.

Sterling-Folker, J. (2020). Confessions of a teaching malcontent: learning to like what you do. In *Pedagogical Journeys through World Politics* (pp. 77-90). London: Palgrave Macmillan, doi: 10.1007/978-3-030-20305-4_7.

Sternberg, R. (1986). A triangular theory of love. *Psychological Review*, *93*(2), 119 -135

Stark, L., Malkmus, E., Stark, R., Brünken, R. & Park, B. (2018). Learning-related emotions in multimedia learning: An application of control-value theory. *Learning and Instruction*, *58*, 42-52. doi:10.1016/j.learninstruc.2018.05.003.

Storch, N. (2018). Written corrective feedback from sociocultural perspectives: A research agenda. Language Teaching, *51*(2), 262-277. https://doi.org/10.1017/S0261444818000034

Strauss, A. & Juliet, C. (1994). Grounded Theory methodology: An overview. In N. Denzin & Y. Lincoln (Eds.) *Sage Handbook of Qualitative Research* (1st Ed.) (pp. 273–284). Thousand Oaks: Sage

Such, B. (2019). Scaffolding English language learners for online collaborative writing activities. *Interactive Learning Environments*, Routledge. doi:10.1080/10494820.2019.1579233.

Sung, Y., Chang, K. & Yang, J. (2015). How effective are mobile devices for language learning? A meta-analysis. *Educational Research Review*,*16*, 68–84.

Sung, E. & Mayer, R. (2012). Five facets of Social Presence in online distance education. *Computers in Human Behaviour*, *28*(5), 1738-1747.doi.org/10.1016/j.chb.2012.04.014

Sundqvist, P. (2009). Extramural English matters: Out-of-school English and its impact on Swedish ninth graders'oral proficiency and vocabulary (Doctoral dissertation). Karlstad University, Karlstad, Sweden.

Sundqvist, P. & Sylvén, L. (2014). Language-related computer use: Focus on young L2 English learners in Sweden. ReCALL, *26*(1), 3–20.

Sundqvist, P. & Sylvén, L. (2016). Extramural English in teaching and learning. London, UK: Palgrave Macmillan.

Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 97–114). Oxford, UK: Oxford University Press.

Swain, M. (2019). *Perspectives on language as action: festschrift in honour of Merrill Swain.* M. Haneda & H. Nassaji (Eds.). Bristol, New York: Multilingual Matters.

Sylvén, L. K., & Sundqvist, P. (2012). Gaming as extramural English L2 learning and L2 proficiency among young learners. ReCALL, 24(3), 302–321.

Tashakkori, A. & Teddlie, C. (1998). *Mixed methodology: Combining Qualitative and Quantitative Approaches*. Thousand Oaks: Sage.

Tashakkori, A. & Creswell, J. (2007). The new era of mixed methods. *Journal of Mixed Methods Research, 1*(2), 3-7.

Tashakkori, A. & Teddlie, C. (2008). Quality of inferences in mixed methods research: Calling for an integrative framework. In M. Bergman (Ed.), *Advances in mixed methods research* (pp. 101-119). Thousand Oaks: Sage.

Tellis, W. M. (1997). Application of a case study methodology. *The Qualitative Report, 3*(3), 1-19. Retrieved from http://nsuworks.nova.edu/tqr/vol3/iss3/1

Tennyson R. & M. Cocchiarella, (1986). An empirically based instructional design theory for teaching concepts. *Review of Educational Research*, *56*(1), 40-71.

Thanasoulas, D. (2001). The importance of teaching culture in the foreign language classroom. *Radical Pedagogy 3*(3), 1-25.

Thomas, M. (2003). *U.S. Patent No. 6,565,358*. Washington, DC: U.S. Patent and Trademark Office.

Thomson, M., MacInnis, D. & Whan Park, C. (2005). The ties that bind: Measuring the strength of consumers' emotional attachments to brands. *Journal of Consumer Psychology*, *15*(1), 77-91. doi: 10.1207/s15327663jcp1501_10.

Tochon, F. (2014). *Help them learn a language deeply - Francois Victor Tochon's Deep Approach to world languages and cultures.* Blue Mounds, Wisconsin: Deep University Press.

Toepoel, V. (2016). *Doing Surveys Online*. Thousand Oaks, CA: Sage.

Tomasello, M., Carpenter, M., Call, J., Behne, T. & Moll, H. (2005). In search of the uniquely human. *Behavioral and brain sciences*, *28*(5), 721-727. doi:10.1017/S0140525X05000129.

Torok, S., McMorris, R. & Lin, W. (2004). Is humour an appreciated teaching tool? Perceptions of professors' teaching styles and use of humour. *College Teaching*, *52*(1), 14-20 doi:10.3200/CTCH.52.1.14-20.

Tschannen-Moran, M. (2017). Trust in Education. In Ox*ford Research Encyclopedia of Education.*

Ushioda, E. (2008). Motivation and good language learners. In C. Griffiths (Ed.), *Lessons from good language learners* (pp. 19–34). Cambridge, UK: Cambridge University Press.

Ushioda, E. (2011). Language learning motivation, self and identity: current theoretical perspectives, *Computer Assisted Language Learning*, *24*(3), 199-210, doi:10.1080/09588221.2010.538701

Ushioda, E. (2011). Motivating learners to speak as themselves. In G. Murray, G. Xuesong, & T. Lamb (Eds.), *Identity, motivation, and autonomy in language learning* (pp. 11–24). Bristol, UK: Multilingual Matters.

UNESCO, (1994). The Salamanca statement and framework for action on special needs education: adopted by the *World Conference on Special Needs Education; Access and Quality*. Salamanca, Spain, 7-10 June 1994. UNESCO.

UNESCO, (2016). *Education 2030 Framework for Action*. New York: UNESCO. Retrieved from https://unesdoc.unesco.org/ark:/48223/pf0000245656.

Valdes, J. & Swan, M. (Eds.). (1986). *Culture bound: Bridging the cultural gap in language teaching*. Cambridge, UK: Cambridge University Press.

Van Lange, P., Rusbult, C., Drigotas, S., Arriaga, X., Witcher, B. & Cox, C. (1997). Willingness to sacrifice in close relationships. *Journal of Personality and Social Psychology*, *72*(6), 1373-1395. doi:10.1037/0022-3514.72.6.1373

Van Velzen, C., Volman, M. & Brekelmans, M. (2019). There is no need to sit on my hands anymore! Modelling and scaffolding as mentoring tools during co-teaching. J. Murray, A. Swennen & C. Kosnik (Eds.) *International Research, Policy and Practice in Teacher Education* (pp. 155-170). Berlin/Heidelberg: Springer International Publishing. doi: 10.1007/978-3-030-01612-8_11.

Van Lier, L. (2004). The ecology and semiotics of language learning: A sociocultural perspective, *13*(3), 79-103.

Veresov, N. (2017). The concept of *perezhivanie* in cultural-historical theory: Content and contexts, pp. 47-70 in *Perezhivanie, emotions and subjectivity: advancing Vygotsky's Legacy* (Eds. M. Fleer, F. González Rey & N. Veresov). New York, Springer

Vincent, J. (2006). Emotional attachment and mobile phones. *Knowledge, Technology & Policy, 19*(1), 39-44.

Vygotsky, L. (1962). *Thought and language*. Cambridge, Massachusetts: MIT Press.

Vygotsky, L. (1978). *Mind in society: the development of higher psychological processes*. Cambridge, Massachusetts: Harvard University Press.

Wagner, E. (1994). In support of a functional definition of interaction. *American Journal of Distance Education*, *8*(2), 6-29. doi:10.1080/08923649409526852.

Walker, J. (2009). Authoritative classroom management: How control and nurturance work together. *Theory into Practice*, *48*(2), 122-129.

Warnock, M. (1978). The Warnock report: report of the committee of enquiry into the education of handicapped children and young people. Available from: www.educationengland.org.uk/documents/warnock/warnock1978.html (30/09/2019)

Whang, Y., Allen, J., Sahoury, N., & Zhang, H. (2004). Falling in love with a product: The structure of a romantic consumer-product relationship. *Advances in Consumer Research*, *31*, 321-327.

Willig, C. & Stainton-Rogers, W. (2017). *The SAGE handbook of qualitative research in psychology*. Thousand, Oaks, CA: Sage

Wilson, D. (1997). *Accessible authenticity: using Internet resources with school foreign language learners in difficulty*. FLEAT III, University of Victoria, Victoria, British Columbia, Canada.

Winke, P. (2011). Evaluating the validity of a high-stakes ESL test: Why teachers' perceptions matter. *TESOL Quarterly*, *45*(4), 628-660. doi:10.5054/tq.2011.268063

Withers, C. & Dill, D. (2019). Scaffolded learning using an interactive tutorial: Moving from a one-shot into an in-class exercise using an interactive tutorial for scaffolded learning about literature searching. Cleveland, Ohio: *ACRL 2019 Conference*, April 10-13, 2019

Wood, R. (1893). *Dictionary of quotations from ancient and modern English and foreign sources: including phrases, mottoes, maxims, proverbs, definitions, aphorisms, and sayings of wise men, in their bearing on life, literature, speculation, science, art, religion, and morals especially in the modern aspects of them.* London: Frederick Warne & Co.

Woodfield, H. (2010). What lies beneath? Verbal report in interlanguage requests in English. *Multilingua: Journal of Cross-Cultural and Interlanguage Communication, 29*(1), 127.doi.org/10.1515/mult.2010.001

Wright, R., Jones, G. & D'Alba, A. (2013, October). Person over pedagogy: Rapport-building traits of online instructors. In Association for the Advancement of Computing in Education (Ed), E-*Learn: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education* (pp. 1603-1612). Retrieved from https://www.learntechlib.org/primary/p/115106/

Wu, J. & Chan, R. M. (2013). Chinese teachers' use of humour in coping with stress. *International Journal of Psychology*, *48*(6), 1050-1056. doi:10.1080/00207594.2012.734623

Wubbels, T. Brekelmans, M., den Brok, P., & van Tartwijk, J. (2006). An interpersonal perspective on classroom management in secondary classrooms in the Netherlands. In C. Evertson & C. Weinstein (Eds.), *Handbook of classroom management: Research, practice, and contemporary issues* (pp. 1161–1191). Mahwah, NJ: Erlbaum.

Wundt, W. (1920). Kultur und geschichte. In *Völkerpsychologie eine untersuchung der entwicklungsgesetze von sprache, mythos und sitte* (Vol 10). Leipzig: Engelmann

Yeh, H., Tseng, S. & Chen, Y. (2019). Using online peer feedback through blogs to promote speaking performance. *Journal of Educational Technology & Society*, *22*(1), 1-14. Retrieved from www.jstor.org/stable/26558824

Yin, R. (1994). *Case study research: Design and methods.* Thousand Oaks, CA: Sage

Youssef, C. & Luthans, F. (2007). Positive organizational behaviour in the workplace: The impact of hope, optimism, and resilience. *Journal of Management*, *33*(5), 774-800.

You, J. & Kang, M. (2014). The role of academic emotions in the relationship between perceived academic control and self-regulated learning in online learning. *Computers & Education*, *77*, 125-133. doi.org/10.1016/j.compedu.2014.04.018.

Zuboff, S. (2019). *The age of surveillance capitalism: the fight for a human future at the new frontier of power*. Profile Books: London.

Appendices

Appendix A: Initial Online Survey questions

Appendix B: Confirmatory expert interview questions

Appendix A: Initial Online Survey questions

Participant information and consent

The following text was placed on the first screen of the online survey.

This short online survey gathers data as part of my research to investigate the role of emotional attachment in informal online education. Emotional attachment means students feel an emotional need to continue participating in the course. The short survey should take approximately 15-20 minutes. If you do not wish to participate, simply discard the survey. Completing and clicking submit on the survey constitutes your consent to participate.

Your participation in this project is entirely voluntary and anonymous. All comments and responses will be treated confidentially. Your privacy is treated very seriously and all responses will be securely held on a password-controlled computer to which only I have access. Once consolidated for analysis into a statistical package, your data is annonymized and original surveys will be deleted. Respondent names will never appear on any publication. Please note: if you wish to withdraw from the project after you have submitted your responses, the researcher is unable to remove your data from the project as it is anonymous.

Your decision whether you take part, do not take part, or to take part and then withdraw, will in no way impact your current or future relationship with the University of Southern Queensland.

There are no anticipated risks associated with your participation in this project.

If you have any concerns or complaints about the ethical conduct of the project you may contact the University of Southern Queensland Ethics Coordinator on (07) 4631 2690 or email ethics@usq.edu.au. The Ethics Coordinator is not connected with the research project and can facilitate a resolution to your concern in an unbiased manner.

Thanks for your participation.

Ms Elena Huston

Email: huston.elena@usq.edu.au

Part A: About You					
1.1. Current location					
1.2 Native language					
1.3 Place of birth					
1.3 Age (please tick)	18-25 ☐	26-65 ☐	65+ ☐		
2. Sex	Male ☐	Female ☐			
3. Occupation					
4. Years of involvement in language learning/instruction	1-5 ☐	5-10 ☐	10-15 ☐	15-25 ☐	25-40 ☐
5. How computer competent are you?	Extremely competent/Expert Very competent Moderately competent Slightly competent Novice				
6. How often do you have informal telephone e-learning language lessons (e.g. via Skype?)	Once a week 3 times or fewer times a week 4 times or 5 times a week Every day				
7. In your view, how does emotional attachment affect second language learning? Emotional attachment means students feel an emotional need to continue participating in the course.	Very strongly Strongly Moderately Slightly Not at all				
Part B – Emotional attachment elements.					

8. How would you rate the importance of the following teaching factors for emotional attachment to your course? (Please circle)	A (Extremely Important)	B (Generally Important)	C (Unimportant)
8a. Affection			
8b Friendliness			
8b. Connection			
8c. Attached			
8d. Passion			
8e. Delighted			
8f. Trust			
8g. Love			
8h. Relationship			
8i. Fear			
8.j Hope			
8.k Use of emotion			
8.l Use of humour			
8.m Self-disclosure			
8.n Continuing a thread			
8.o Complimenting others			

8.p Expressing agreement			
8.q Using names			
8.r Acknowledgement of others via agreement/disagreement,			
8.s Acknowledgement of others via asking questions			
8.t Acknowledgement of others via compliments			
8.u Expressing appreciation			
8.v Group cohesion via greetings/salutations			
8.w Group cohesion via vocatives			
8.x Group reference/inclusivity			
8.y Please, indicate other factors you believe are important for Emotional Attachment			

Part C – Emotional attachment impact on informal online learning	
9. What can language instructors do to enhance Emotional Attachment in informal online learning environments?	Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree
10. Describe to which extent you feel emotionally attached to your online language learning?	Strongly agree Somewhat agree Neutral Somewhat disagree

	Strongly disagree
11. Do you feel that the presence of the teacher makes you feel more secure?	Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree
12. Would you say: "Informal online language learning suits my educational needs?"	Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree
13. Would you say: "Informal online learning is important to me?"	Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree
15. Would you say you are successful in informal online learning?	Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree
16. Is informal online learning delivery easy to use?	Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree
17. The instructor should help in identifying areas of agreement and disagreement on course topics	Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree
18. The instructor should help to keep course participants engaged and participating in productive dialogue	Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree
19. The instructor should help to keep course participants on task in a way that helps them learning	Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree

20. Instructor actions should reinforce the development of a sense of community among course participants	Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree
21. The instructor should help to focus discussion on relevant issues in a way that helped me to learn	Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree
22. The instructor should provide feedback to help me understand my strengths and weaknesses	Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree
23. Online or web-based communication is an excellent medium for social interaction	Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree
24. I felt comfortable conversing through the online medium	Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree
25. Problems posed increased my interest when learning through informal online environments	Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree
26. I have developed solutions to course problems that can be applied in practice	Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree
27. I can apply the knowledge created in information online learning environments to my work or other non-class related activities	Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree

28. Overall, I was satisfied with in information online learning environments	Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree

Thank you for your participation!

Appendix B: Confirmatory expert interview questions

Interview questions for experts

Where originally are you from?

How long are you teaching the second language?

How computer competent are you?

How often do you have informal telephone e-learning language lessons (e.g. Via Skype?)

In your view, how does emotional attachment affect second language learning?

How would you rate the importance of the following teaching factors for emotional attachment to your informal learning? Please rate from 1-5 (where 1 is the lowest)

8a. Affection
8b. Friendliness
8b. Connection
8c. Attached
8d. Passion
8e. Delighted
8f. Trust
8g. Love
8h. Relationship
8i. Fear

8j. Hope
8k. Use of emotion (interest, enjoyment, sadness, anger)
8l. Use of humour
8m. Self-disclosure
8n. Continuing a thread
8o. Complimenting others
8p. Expressing agreement
8q. Using names
8r. Acknowledgement of others via agreement/disagreement
8s. Acknowledgement of others via asking questions
8t. Acknowledgement of others via compliments
8u. Expressing appreciation
8v. Group cohesion via greetings/salutations
8w. Group cohesion via vocatives
8x. Group reference/inclusivity
8y. Attention

Please, indicate other factors you believe are important for Emotional Attachment

How effective in your view is informal online learning and why?

How successful are you in informal online teaching?

How easy informal online teaching delivery to use?

How would you describe a web-based communication as a medium for social interaction?

Thank you for your participation!