UNIVERSITY OF LIVERPOOL

Dynamics of Learners' Emergent Motivational Disposition: The Case of EAP Learners at a Transnational English-Medium University

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by

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For Aspen and Woody, who give me hope for the future.

Abstract

This thesis aims to better understand the processes affecting the motivational dynamics of English for Academic Purposes (EAP) learners' at a transnational education (TNE) university that uses English as its medium of instruction (EMI). It joins the ongoing discussion of how to leverage Complex Dynamic Systems Theory (CDST) to understand second language (L2) motivation and takes a special interest in understanding what demotivates students to study EAP.

It employed a mixed methodology and two-stage research design to explore how EAP learners' motivation changed over the course of a semester in their first year, as well as what the salient demotivating and motivating factors were for these students. First, motivation journals, motivation questionnaires, semi-structured interviews, and focus group discussions were leveraged to investigate how and why the motivation levels of 60 first year EAP students changed over a period of 10 weeks. Salient demotivating factors identified from the data were then further explored by means of a demotivation questionnaire that was administered to the larger student population (n=1517) in order to understand how frequently these factors were found to be a source of demotivation.

Learners' motivational disposition was found to be complex and multifaceted, changing frequently between motivated and demotivated states. Motivation constructs (e.g. L2 self guides, instrumentality, etc.) frequently used in previous L2 motivation studies did not sufficiently account for the changes in students' motivational disposition from day to day. Instead, it was found that motivational disposition, or students' willingness to expend effort to learn at any given moment, emerges from the complex and non-linear interaction of a multitude of factors

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internal and external to the language learner and language classroom. These factors exerted influences of different strengths on motivational disposition according to changes in time and context. Sources of demotivation were frequently associated with factors outside of the EAP classroom and sources of motivation were frequently associated with factors inside the EAP classroom.

The study is significant for both theory and research methodology relating to L2 motivation. First, while CDST has been used as a metaphor for understanding dynamics of motivation, the current study provides evidence that characteristics of CDSs can be grounded in actual data (e.g. the emergent nature of motivation, sensitivity to initial conditions, etc.). Second, based on these findings this thesis presents a new CDST informed model of language learning motivation. Third, it suggests it is necessary to move away from a binary way of thinking about motivational factors that categorizes them into a dichotomy of motivating/demotivating factors; a more complex and fluid understanding of motivational factors is needed. Lastly, it highlights the need for frequent sampling that ensures minimal time has passed between when students recollect motivating/demotivating experiences and the actual time those experiences occurred.

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List of Abbreviations

AMTB	Attitude/Motivation Test Battery
CDS	Complex Dynamic System
CDST	Complex Dynamic System Theory
CEFR	Common European Framework of Reference
EAP	English for Academic Purposes
EFL	English as a Foreign Language
ELL	English language learners
EMI	English as the Medium of Instruction
ESP	English for Specific Purposes
HEI	Higher education institution
IELTS	International English Language Testing System
L1	First language
L2	Second language
L2MSS	L2 Motivational Self System
MMSS	Multilingual Motivational Self System
RQM	Retrodictive Qualitative Modelling
SLA	Second Language Acquisition
SLD	Second Language Development
UoL	University of Liverpool
XJTLU	Xi'an Jiaotong-Liverpool University

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Chapter 1 Introduction

Section 1.1 The Question of Interest

Of all the primary motivators behind my decision to begin (and see to an end) this research study, one motivator in particular goaded me along more than any other. More than the intrinsic feeling of success that would come from meeting the challenges of completing a doctoral program, more than the potential advances in my career as an educator and researcher that would be afforded by adding the three illustrious letters 'Ph.D.' to my curriculum vitae, was a burning question and an accompanying feeling of irritancy.

Having more than ten years of experience in teaching courses in general English, English for Academic Purposes (EAP), linguistics, linguistic anthropology, intercultural communication, and Modern Greek in America, Europe, and Asia, I considered myself a well experienced and capable teacher when my employment commenced at Xi'an Jiaotong-Liverpool University's (XJTLU) Language Centre. Other EAP teachers at the language centre informed me that I should expect the attendance rate of students in my first-year EAP course to drop as the semester unfolded. I balked at such a suggestion, for surely students would not cease attending *my class.* Unfortunately, their prediction held true and I was horrified as attendance rates stooped lower and lower as the semester progressed.

I took it as a personal insult, honestly. How could the students *not* want to attend *my* class? I had poured my heart and soul into preparing and teaching the course. Admittedly, the subject, academic English, was not the most captivating, but surely the students could see the weight of their decision to cease attending. The academic

skills and vocabulary that students ought to acquire in their first year would establish

the foundation by which they would likely flourish or flounder in their academic

endeavours as they studied at a Higher Education Institution (HEI) that uses EMI for

Transnational Education (TNE). The questions of interest that initiated this study

then are: *How can students' motivation to attend and participate in EAP courses*

drop so low, considering the importance that academic English skills and vocabulary

likely have for students' success in their studies at a TNE EMI university? *What, if*

anything, can be done to improve the situation for students and teachers? These

questions prompted me to learn more about language learner motivation and

demotivation, ultimately giving rise to this thesis. This study, therefore, is a form of

exploratory practice (Allwright, 2003) that is concerned with *understanding*, and,

through that understanding, improving the *quality of life* in the language classroom

for students and teachers.

Section 1.2 Statement of the Problem

As an abstract term, motivation refers to internal mental processes which influence

people's decision to act, how long they act, and to what degree of effort they expend

on that action (Dörnyei & Ushioda, 2011). Motivation therefore is an essential

ingredient for successful second language acquisition (SLA) (Dörnyei & Ryan, 2015;

Ellis, 2004). As Dörnyei and Ryan (2015) noted, the importance of motivation in

SLA is that it

> provides the primary impetus to initiate L2 learning and later the driving
> force to sustain the long, often tedious learning process…. Without sufficient
> motivation, even individuals with the most remarkable abilities cannot
> accomplish long-term goals, and neither are appropriate curricula or good
> teaching enough on their own to ensure student achievement. On the other

hand, high motivation can make up for considerable deficiencies both in one's language aptitude and learning conditions (p. 72).

Of all the individual differences that account for the varying degrees of success in learning an L2, language aptitude and language learning motivation play important roles, and they have been well researched in SLA. Indeed, aptitude and motivation have been referred to as the "big two" individual difference factors, with motivation being only slightly behind language aptitude when it comes to accounting for variance in learners' achievement scores (Ellis, 2004, p. 531).

The recognition that motivation plays an important role in successful language learning is reflected in the plethora of studies, models, and theories relating to L2 motivation, including many studies conducted in Mainland China, where the current study took place (Dörnyei & Chan, 2013; Li & Zhou, 2017; Q. Li, 2014; Taguchi, Magid, & Papi, 2009; Xu & Gao, 2014; You & Chan, 2015). Despite the contributions these studies have made to our understanding of L2 motivation, they are problematic in a few ways.

Firstly, much of the research done in the past two decades in the context of L2 motivation of English language learners (ELL) in Mainland China, and indeed throughout the world, makes use of a cognitive theoretical framework and research methodology that have been criticized for failing to capture the dynamic and complex nature of motivation (Boo, Dörnyei, & Ryan, 2015; Dörnyei, 2014; Dörnyei, MacIntyre, & Henry, 2015b; Waninge, Dörnyei, & De Bot, 2014). Henry (2015) has noted that the reliance on quantitative procedures to investigate motivation constructs has led to these constructs as being perceived as static. While

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these cognitive approaches might be useful in taking photographic stills of constructs of L2 motivation at a particular time (e.g. the Ideal L2 self, instrumentality, and integrativeness), they are less capable of capturing moving pictures that portray the process or narrative of L2 motivation as it changes over time and through different contexts.

In addition, the overreliance on cognitive research methods is problematic because of the tendency to reduce complex phenomena down to well-defined and isolated variables internal to the language learner (Dörnyei, MacIntyre, & Henry, 2015a). There is a growing consensus that L2 motivation must be studied in conjunction with the learning environment as environmental factors are inseparably intertwined with the language learner (Ushioda, 2009, 2015). That is to say that the language learner is affected by the learning environment, and the language learner simultaneously affects the learning environment. Studies that focus solely on motivational factors internal to the language learner therefore fail to capture other important motivational factors and the complexity of motivation, thereby painting an incomplete picture of L2 motivation.

While there has been a steady flow of studies specifically investigating factors of demotivation of ELLs, including factors internal and external to the learner, these studies have mostly been conducted in Japan and Korea, in non-TNE-EMI contexts (Falout, 2012; Falout & Falout, 2005; Falout & Maruyama, 2004; Kikuchi, 2009, 2015; Kikuchi & Sakai, 2009; Song & Kim, 2017). The educational contexts of these studies vary greatly in comparison with the current EAP TNE EMI context in question. For example, several studies suggest that teacher centred pedagogy in

Japan and Korea (Carpenter, Falout, Fukuda, Trovela, & Murphey, 2009; Falout & Maruyama, 2004; Kikuchi, 2009; Song & Kim, 2017) is perhaps the most common and powerful demotivating factor for ELLs in these educational contexts.

Language teachers at XJTLU, however, follow educational practices common in the UK and, for the most part, leverage student centred teaching methodologies. Moreover, whereas students in EFL contexts may study English only in English language classes, students in the TNE EMI context of XJTLU use English much more broadly as nearly all courses are taught in English. At XJTLU, English serves as the *lingua franca* of the university and it is used for academic exchange, lectures, policies, and professional services university wide. The language learning environment of the TNE EMI student is therefore more expansive and extends further into the students' daily lives than the language learning environment of EFL contexts.

As a result, what factors demotivate and motivate students in the TNE EMI context may greatly differ to those factors identified in EFL contexts. Yet, as far as the author is aware, no study to date has identified salient demotivating and motivating factors within this context. Furthermore, studies on demotivation of ELLs in Mainland China are sparse, tend to adopt traditional cognitivist research methodologies that fail to capture the dynamic nature of motivation (C. Li, 2014; Li & Zhou, 2017), and take place in EFL instructional settings. It seems that the time is ripe for an empirical study that leverages non-traditional cognitivist research methodologies to investigate motivational dynamics of ELLs and to identify

demotivating and motivating factors within the growing TNE EMI context in Mainland China.

Because of the problems associated with the cognitive approach taken in previous studies, the last decade has seen a rising interest in leveraging a new theoretical framework, Complex Dynamic Systems Theory (CDST), as well as non-traditional cognitivist research methodologies, to investigate the dynamic, complex, and multifaceted nature of L2 motivation (Boo et al., 2015; Dörnyei, MacIntyre, et al., 2015b). While there have been a growing number of empirical studies that investigate L2 motivation through a CDST lens (Dörnyei, MacIntyre, et al., 2015b; Waninge et al., 2014), none of these studies consider EAP learners or the context of TNE EMI universities. As research exploring the EAP TNE EMI context is uncommon, and considering the significant role that the learning environment plays in influencing L2 motivational dynamics (which is often undervalued in previous studies), it is arguable that a study adopting a CDST approach to investigating the L2 motivational dynamics of EAP learners within the TNE EMI context is merited. Therefore, this study aims to fill these gaps in the literature by leveraging a CDST approach to researching L2 motivational dynamics of EAP learners in a TNE EMI university within Mainland China.

Section 1.3 Educational and Theoretical Contexts of the Study

This section of the introduction will offer a brief explanation of the educational and theoretical contexts of the current study. A more thorough review of L2 motivation theories, models, and studies will be given in Chapter 2.

Section 1.3.1 Educational Context

The question of how students' motivation levels could plummet so low as to influence students' decision to suspend attendance to, what should be, a practical and indispensable EAP class, extends beyond the confines of my personal EAP class and is applicable to the larger context of the perceived affordances of studying at a TNE EMI university in Mainland China and EMI universities throughout the world. As the English language has become the preeminent language on the international stage, and as it has been adopted as the *lingua franca* most commonly used in the international academic and business communities (Crystal, 2003), one would think that university students would be eager to take advantage of the perceived benefits of studying at a TNE EMI university, such as XJTLU.

While definitions of TNE vary, this thesis will follow O'Mahony's (2014) definition: an "award- or credit-bearing learning undertaken by students who are based in a different country from that of the awarding institution" (p. 8). Students enrolled in TNE HEIs around the globe often perceive obtaining a degree from a foreign (often Western) TNE HEI to be advantageous and instrumental in securing desirable future employment (McNamara & Knight, 2014; Mellors-Bourne, Jones, & Woodfield, 2015). The prestige and status of the foreign TNE HEIs, as well as the perceived international outlook and multi-cultural experience ideally afforded by them, are salient reasons why many students view receiving a TNE in such a favourable light (McNamara & Knight, 2014).

In addition, many TNE HEIs offer EMI programs (Perrin, 2017), which students perceive to be advantageous in developing their ability to understand and

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communicate in English. Following Dearden's (2014) definition, I will use EMI to refer to "the use of English language to teach academic subjects in countries or jurisdictions where the first language (L1) of the majority of the population is not English" (p.4).

TNE and EMI are growing phenomena as many HEIs are eager to meet the growing demand for TNE and EMI in order to reap many of the benefits afforded by TNE. These benefits include: increasing revenue and enhancing the reputation and brand of the parent institution (*International education: Global growth and prosperity*, 2013); exploring novel strategic research opportunities (European University Association, as cited in O'Mahony, 2014); increasing participation (Wallace & Dunn, as cited in O' Mahony, 2014); and getting exposure to new ideas and influences (Adam, 2001, p. 5).

Despite the benefits afforded to students and HEIs, TNE is not without its drawbacks. Some research suggests that TNE programs fail to provide adequate support for students' development of intercultural skills and cohorts may actually be, converse to expectations, mono-cultural (Mellors-Bourne et al., 2015). Struggling in EMI programs, where the content is all in English, some students may not get the same depth of understanding had they been studying in their mother tongue, as new accents, expectations, and teaching styles are all challenges that students may face and need to adjust to.

Regardless of the perceived advantages and drawbacks of EMI programs at TNE HEIs, the number of students enrolled in such institutions is on the rise. In 2016-

2017 more students, locations, and universities were involved in UK Higher Education TNE than ever before (Boe, 2018, p. 2). The number of students enrolled in UK HE TNE programs (707,915) was 1.6 times higher than the number of international students in the UK during the same year and nearly 85 percent of UK HEIs offered TNE degree programs. Within China, cooperation between Sino-foreign HEIs has been increasing. For example, following the 2015 UK-China Education Summit 23 education agreements were signed with the intention of strengthening future collaboration and increasing student mobility (Smith, 2015). The University of Nottingham Ningbo, Xi'an Jiaotong-Liverpool University, Duke Kunshan University, Wenzhou-Kean University, and New York University Shanghai are all examples of joint venture Sino-foreign universities that demonstrate the growing trend of TNE HEIs that offer EMI curricula within Mainland China.

In the context of EMI programs at TNE HEIs, including the Sino-foreign cooperative universities mentioned above, students and academics must understand the conventions of academic writing in English (e.g. Hyland, 2009) in order to succeed in their academic endeavours. Hyland (2018), has suggested that Academic writing English may even be considered a new form of communicative competence. If policies, lectures, textbooks, assignments, and assessments are all in English, it stands to reason that without a solid foundation of EAP, students will be unlikely to understand the content of lectures, to comprehend what they are required to do for assignments and assessments, and ultimately to perform well in their studies (Evans & Morrison, 2011). Indeed "one of the major challenges facing EMI in universities everywhere in the world is the question of whether students' English is good enough for them to benefit from EMI" (Zhao & Dixon, 2017, p. 12).

XJTLU, where the present study took place, is a TNE HEI that utilizes EMI.

Established in 2006, XJTLU is a Sino-British joint venture private university located

in Suzhou, Jiangsu Province, near the east coast of China. Accredited by the

University of Liverpool (UoL), XJTLU offers undergraduate students' dual degrees:

a UK degree awarded by the UoL and a Chinese degree by XJTLU. This may be

beneficial to students as some local employers may prefer a candidate with a degree

awarded by a Chinese HEI, while foreign employers may prefer a degree awarded

from a Western HEI. Graduate students, on the other hand, are awarded degrees

solely from the UoL. All courses, excluding Chinese, Spanish, and Japanese

language courses and compulsory Chinese Culture, Communication Studies, and

Physical Education courses, are delivered in English. After two years of studying at

XJTLU, most undergraduate students, subject to academic achievement, have the

opportunity to transfer to the UoL for an additional two years of study to finish their

undergraduate studies ("Transfer to the University of Liverpool," 2019). As XJTLU

is a private university, the tuition fees are substantially higher than other publicly

funded universities within Mainland China. For the 2018-2019 academic year, the

tuition fee for undergraduate students was 88,000 RMB per academic year ("Fees,"

2019). The average yearly salary of Suzhou residents, according to the newspaper

China Daily, was 90,576 RMB ("Top 10 Chinese cities with highest average monthly

salary," 2017). The fact that Suzhou is ranked ninth of all Chinese cities according to

average salary suggests that receiving an education at XJTLU is beyond the financial

means of most Chinese students and their families.

Knowing that the cost of TNE universities tend to be more expensive than local institutions, and knowing the perceived advantages and challenges of studying at a TNE EMI university, it is easy to see how the question – how can students *not* want to attend class - can be extended to the broader TNE HEI context. How could students not want to attend their EAP classes? Do they not understand that the academic skills they learn in their EAP classes are essential to their success in understanding and performing well in their EMI major-related courses? Are they not aware of how much money they (or their parents) are investing in their education? Do they not see they are just throwing it all away? What happens to their motivation to attend class, participate, and complete assignments? What factors influence students to become demotivated over the course of the semester? How can language teachers and researchers help students become more motivated?

These questions, arising from this particular context, served as the primary impetus behind this academic undertaking to better understand L2 motivational dynamics. The primary aim of this thesis, then, is to investigate the salient factors behind L2 motivational dynamics of first-year EAP learners as they adapt to a TNE EMI context. It is hoped that the answers found from this research may be of use to other educators and researchers who are interested in finding answers to the question - How can students not want to attend or participate in class? In addition to helping educators and researchers working in the TNE EMI context find possible answers to this question, this thesis contributes to the ongoing debate within the applied linguistics academic community regarding the feasibility of applying a CDST approach to researching SLA, and more specifically, L2 motivation. Before outlining

the study's research questions, objectives, and contributions to research, practice and theory, a brief explanation of the theoretical context is in order.

Section 1.3.2 Theoretical Context of the Study

Despite the attention L2 motivation has received, "no existing motivation theory to date has managed – or even attempted – to offer a comprehensive and integrative account of all the main types of possible motives" because motivation theories "intend to explain nothing less than why humans think and behave as they do, and it is very doubtful that the complexity of this issue can be accounted for by a single theory" (Dörnyei & Ushioda, 2011, p. 4). There are inherent challenges in researching motivation. Perhaps the biggest challenge is the one pointed out by Dörnyei and Ushioda (2011), that there are no objective measures of the abstract concept of motivation. Research on motivation will always have an element of subjectivity and the challenge is to keep this subjectivity to a minimum. Additionally, motivation is multidimensional and cannot wholly be represented by simple measures such as a few questionnaire items. Lastly, motivation is dynamic, changing over time as changes in environmental factors across time exert different influences upon the motivation of the L2 learner.

Regardless of the challenges to researching motivation, the past six decades have seen no shortage of studies, models, and theories regarding L2 motivation, in part because of how essential an ingredient motivation is to successful SLA. For the purposes of this introductory chapter, it is sufficient to say that over the past sixty years, theories and conceptualizations of L2 motivation have evolved in that L2 motivation, while once viewed as a static attribute and variable in learners' cognitive

individual differences, is now being perceived as a multifaceted and dynamic variable in a complex non-linear system and that motivation is subject to influence from environmental or contextual factors across time. Advances in the conceptualization and theorizing of L2 motivation have largely occurred as a result of larger shifts in theories of education and psychology, as well as worldwide globalization and the growing importance of English as an international language.

In the past two recent decades L2 motivation research has been undergoing a coming-of-age process as many scholars have begun to acknowledge the multifaceted, dynamic, and complex nature of L2 motivation, viewing it as a process rather than an end product. This development in the conceptualization of L2 motivation has been accompanied by growing pains, where researchers have been perplexed by how to make use of scientific research methods and instruments to study such a multifaceted, complex, and dynamic phenomenon. One of the catalysts for the reconceptualization of L2 motivation from being static to dynamic has been the introduction of non-linear dynamic systems to the field of SLA research.

The culprit, or hero, depending on which side one takes, of the introduction of non-linear dynamic systems to SLA research is Larsen-Freeman (1997; 2002). This introduction of non-linear dynamic systems was subsequently followed by emergentism (Ellis & Larsen-Freeman, 2006b), dynamic systems theory (de Bot, Lowie, & Verspoor, 2007) and complexity theory (Larsen-Freeman & Cameron, 2008a). The abbreviation "CDST" is now widely utilized by SLA researchers to refer to these complementary foci (e.g. chaos theory, complexity theory, emergentism, dynamic systems theory) (Hiver & Al-Hoorie, 2016).

CDST is a relatively novel and holistic approach to SLA, and its adoption by SLA researchers has been referred to as the 'dynamic turn' in SLA (Dörnyei, MacIntyre, et al., 2015b). It takes into account "the combined and interactive operation of a number of different elements/conditions relevant to specific situations, rather than following the more traditional practice of examining the relationship between well-defined variables in relative isolation" (Dörnyei, MacIntyre, et al., 2015a, p. 1).

Not all scholars have been eager to embrace the dynamic turn and adopt a CDS approach for SLA research. In his scathing critique of Larsen-Freeman and Cameron's (2008a) book *Complex systems and applied linguistics,* (Gregg, 2010) answered the question of "Language: a complex system?" with the emphatic statement "No and no" (p. 552). This is in contrast to other scholars like (Ellis, 2008) who emphatically stated that "Language is a dynamic system." (p. 232) in the first sentence of his article. To some scholars, such as Gregg, CDST has a well-established place and role in the physical sciences, but they are less convinced that it can be applied in SLA. One of Gregg's major concerns, at least in 2010 when he wrote his critique, is the lack of empirical research conducted that leverages CDST for SLA.

The past decade, however, has seen dramatic growth in the number of CDST based empirical studies in SLA. Perhaps the hesitation to initially embrace CDST can be attributed to the difficulty of leveraging CDS for empirical studies of SLA, which has been acknowledged by some of its supporters. As Dörnyei, Macintyre, and Henry (2015a) put it:

scholars spent much more time *talking* about research in a dynamic systems vein than actually *doing* it. Furthermore, even when dynamic principles were referred to in data-based studies, this was often to explain away difficult-to-interpret results, stating in effect that such results occurred because of the unpredictable or 'emergentist' nature of the system. At the same time, in informal conversations at conferences, it was not at all uncommon to hear scholars privately express the sense of being at a loss as to how exactly to go about researching dynamic systems. (pp. 1-2)

Some of the major challenges of implementing a CDS approach to SLA include the difficulty of modelling nonlinear change, the challenge of observing a whole system rather than just a few variables within the system, and the necessity of finding alternatives to traditional quantitative research methodologies in order to investigate dynamic relationships rather than linear ones (Verspoor, De Bot, & Lowie, 2011).

Despite these challenges, many scholars see value and potential in adopting a CDS approach to SLA. Dörnyei, MacIntyre, and Henry (2015a, pp. 3-4) list the following advantages:

(1) The ability to explore the multi-faceted complexity of language learning

(2) The emphasis on both learner-internal and learner-external factors, coupling the individual with the learning context

(3) The ability to focus on the individual, increasing ecological validity

(4) The acceptance of the combining of qualitative and quantitative methodologies

(5) The elevation in importance of longitudinal research and the significance of change over time.

The theoretical context of the study is therefore one in transition with L2 motivation researchers leveraging a diverse array of methodologies to explore motivation from a CDST perspective. For example, Dörnyei, MacIntyre, and Henry's (2015b) edited anthology *Motivational Dynamics in Language Learning* includes 13 empirical studies that leveraged 13 different CDST research methodologies. Yet, these authors conclude that they "see it as an imperative that these and other dynamic methods be further developed and refined if the field is to move forward along the dynamic path" (pp. 425-426). The current study is therefore situated in the theoretical backdrop of this growing push to embrace a CDST perspective and explore and refine CDST informed research methodologies. The next section will outline the research objectives and questions that guide the research.

Section 1.4 Research Objectives and Questions

The current study takes as its main objectives: (1), to investigate the dynamics of motivation of EAP learners at a TNE EMI university; (2) to identify the salient motivating and demotivating factors influencing these dynamics in motivation, (3) to explore the feasibility of using CDST in studying motivation, and (4), to design and utilize new methodological instruments, thereby contributing to the current and ongoing efforts to understand how best to research the complex and dynamic nature of language learner motivation.

In order to achieve these objectives and to guide the research methodology, the study focuses on the following research questions:

1. How does motivation of EAP learners at a TNE EMI university change over the course of a semester in their first year?

2. What are the salient motivating factors for these students?

3. What are the salient demotivating factors for these students?

While fully detailed in the third chapter, the following section will briefly summarize the research methodology utilized to investigate the research questions listed above.

Section 1.5 Research Methodology and Design of the Study

The current study makes use of a mixed-method approach, guided by CDST, to explore motivational dynamics of EAP learners. The research design can be broken down into two phases. The first phase aims to capture the narrative of how individual students' motivation fluctuates over the course of a semester. The motivational dynamics of 60 first-year EAP students were explored over ten weeks via questionnaires, journals, interviews, and focus group discussions. The qualitative data were then coded and analyzed, with the salient demotivating and motivating factors reported by these students being identified. Then, in phase two, this list of salient demotivating and motivating factors was used to create a novel demotivation factor questionnaire. This questionnaire was administered to the wider undergraduate student population. The research design therefore leverages an array of instruments to obtain a 'motion-capture picture' of the narrative of motivational dynamics of individual learners, as well as a 'wide-angle snapshot' of demotivation as experienced by the larger student population.

Section 1.6 Significance of the Study

The findings of the study are significant to theory, research methodology, and pedagogy that relate to language learner motivation. While the contributions and implications of the study are explained in more detail in the concluding chapter of this thesis, a brief summary of some of the more important ones will be given here.

In regard to theory, the current study presents a new CDST informed model of language learner motivation. The model of motivational disposition as an emergent property of internal and external nested systems, presented in section 4.2.11.9, serves as a comprehensive model that adds to other theoretical CDST informed models of motivation (see for example Mercer (2015); Waninge (2015), and Henry (2015)). Grounded by evidence in actual data the model is more comprehensive than previous ones, serving as a visual representation and augmentation to Ushioda's (2009) person-in-context relational view.

Furthermore, the study highlights the need to change the conceptualization of the wide range of demotivating and motivating factors that students are experiencing. As motivational factors can serve as both demotivators and motivators, researchers need to move away from a binary way of thinking about these factors and adopt one that recognizes that the influence these factors have on motivation can and do change according to context.

Lastly, while many studies have employed CDST principles into their research design or used CDST as a sort of metaphor for understanding dynamics related to motivation, the current study provides evidence that such principles or characteristics

of CDSs are valid; the study provides evidence that suggests a CDST approach to understanding language learner motivation can be and is justified by actual data.

Regarding research methodology, the current study is significant because it demonstrates how multiple methods can be used at multiple time points with a large enough sample to adequately capture both the dynamics of motivation and motivational factors. This study implies that it is crucial to (1) conduct frequent sampling of the participants and (2) ensure minimal time has passed between the time when students recollect motivating/demotivating experiences and the actual time of those experiences.

The study also contributes to the field by providing several research instruments for researchers interested in L2 motivation, especially in the EAP/TNE context. These instruments include motivation journals, a motivation questionnaire, and a demotivation questionnaire. These research instruments, which were shown to be valid and reliable in the current study, are now available for other researchers to use for their own purposes and in their respective contexts.

The findings of the study have implications for pedagogical practice as well. A CDST model of motivation, such as the one presented in this thesis, can serve as a valuable framework for approaching and reflecting on language teaching in the classroom. In many ways the adoption of a CDST framework for understanding motivation in the language learning classroom may lead to teachers being more aware and focused on the needs of individual learners. These implications will be more fully discussed in the concluding chapter.

Section 1.7 Scope and Delimitations of the Study

As definitions and conceptualizations of motivation and demotivation vary in the extant literature, this section will briefly delineate definitions and conceptualizations of motivation and demotivation as used throughout this thesis.

Section 1.7.1 Motivation and Motivational Disposition

This thesis adopts the general definition of motivation given by Dörnyei and Ushioda (2011) , that is, motivation "concerns the direction and magnitude of behavior" including "why people decide to do something, how long they are willing to sustain the activity, and how hard they are going to pursue it" (p. 4). Throughout this thesis motivation is viewed as being complex, multifaceted, and dynamic in nature, subject to influence and in return influencing factors internal and external to the language learner. Additionally, a language learner's motivational state or disposition, (i.e. a students' willingness to put in effort to learn at any given moment) is viewed as being an emergent property of the complex and dynamic motivational system.

Section 1.7.2 Demotivation

This thesis adopts a definition and conceptualization of demotivation similar to that employed by (Kikuchi, 2011, 2015). Demotivation, as used in this thesis, refers to the negative effect that internal and external factors have on a learner's motivational disposition. In other words, demotivation leads to a reduction in the learner's willingness to act, study, or learn. It is important to note that "demotivation does not necessarily mean a lack of motivation; demotivation also occurs, for instance, when the motivation of a highly motivated student decreases to an average level" (Kikuchi,

2015, pp. 3-4). Having outlined the scope and delimitations of the study, the next and final section of this introductory chapter will outline the organization of the thesis.

Section 1.8 Outline of the Organization of the Thesis

This thesis is comprised of six chapters. The second chapter reviews extant literature and research studies relating to L2 motivation and how conceptualizations of L2 motivation have evolved over time. It reviews recent studies that utilize a CDST framework for investigating L2 motivation, as well as non CDST related research on demotivating and motivating factors. Research gaps and problematic issues of the reviewed studies are highlighted, thereby providing justification for the current study.

Chapter three outlines the research methodology used to investigate the research questions and achieve the research objectives. It presents the research philosophy adopted for the study and provides a description and justification for the research design, the research setting, participants, and instrumentation leveraged in the study. It also provides a description and justification of the data collection and analysis procedures, including a discussion of the validity and reliability of the methods and instruments used.

Following this, Chapter four presents the findings of the study that are relevant to the research questions and objectives. It begins by presenting and explaining the findings related to the dynamics of motivation of 60 first year EAP learners. It then provides a close-up motion-capture picture of the dynamics of motivation of five individual learners. Next, it explains what the findings mean from a CDST lens, providing a

model of students' motivational disposition to learn EAP as emerging from the complex, non-linear and dynamic interactions between internal and external factors. In addition, the chapter highlights the salient demotivating and motivating factors experienced by EAP learners. Lastly, the chapter reports the findings of a demotivation questionnaire administered to the larger student body.

Chapter five situates the significant findings of this study in the larger context of the existing relevant literature. It underscores the contributions that the current study has made to theory, research, and practice related to language learner motivation, as well as to the TNE EMI context.

The final chapter provides a conclusion to the thesis. It reminds the reader of the aims and key methodological features of the study, provides a brief summary of the most important findings, and highlights its contribution to the development of theory and research. It also discusses limitations and practical applications of the research. Lastly, it provides recommendations for further research.

Chapter 2 Literature Review

Section 2.1 Introduction

The primary aims of this chapter are to review extant literature regarding L2 motivation and demotivation, as well as provide a justification for the current study and the Complex Dynamic Systems (CDS) theoretical framework it leverages. To begin with, an in-depth account of the literature relating to theory and L2 motivation and motivational dynamics will be given. Subsequently, to provide context for the current research, key studies relating to L2 motivational dynamics, as well as demotivating and motivating factors, will be reviewed. Gaps and shortcomings in both the theoretical and research literature will be identified and an accompanying rationale will be given to justify why the gaps are significant enough to merit the current study.

Section 2.2 Historical Overview of L2 Motivation Research and Theory

L2 motivation research can roughly be categorized into three phases (see Figure 2.1). One would be mistaken, however, to view these three historical phases as disparate periods of time apportioned according to clear decisive temporal and theoretical boundaries. Rather, these phases should be viewed as being interconnected and evolving from each other, with conceptions of motivation being tweaked, refined, and reconceptualized according to new contexts, models, and theories, parallel with the shifts and changes in theories and research methodologies in the fields of SLA, psychology, and education. Organizing L2 research into the aforementioned three periods, is useful, however, because doing so provides a framework for understanding the evolution of researchers' conceptualizations of L2 motivation. To put it simply, over the past sixty years L2 motivation has evolved from being viewed

as a static attribute and variable in learners' cognitive individual differences to being

perceived as a multifaceted, complex, dynamic variable in a complex system that is

subject to influence from other environmental or contextual factors across time.

Phase 1 Social Psychological 1959-1990	• Socio-Educational Model of SLA • Integrative and Instrumental orientations
Phase 2 Cognitive Situated 1990-2000	• Self-Determination Theory • Intrinsic and Extrinsic Motivation • Attribution Theory
Phase 3 Process-Oriented 2000-Present	• Process Model of L2 Motivation • Person-in-context Relational View • L2 Motivational Self System • Complex Dynamic Systems Theory
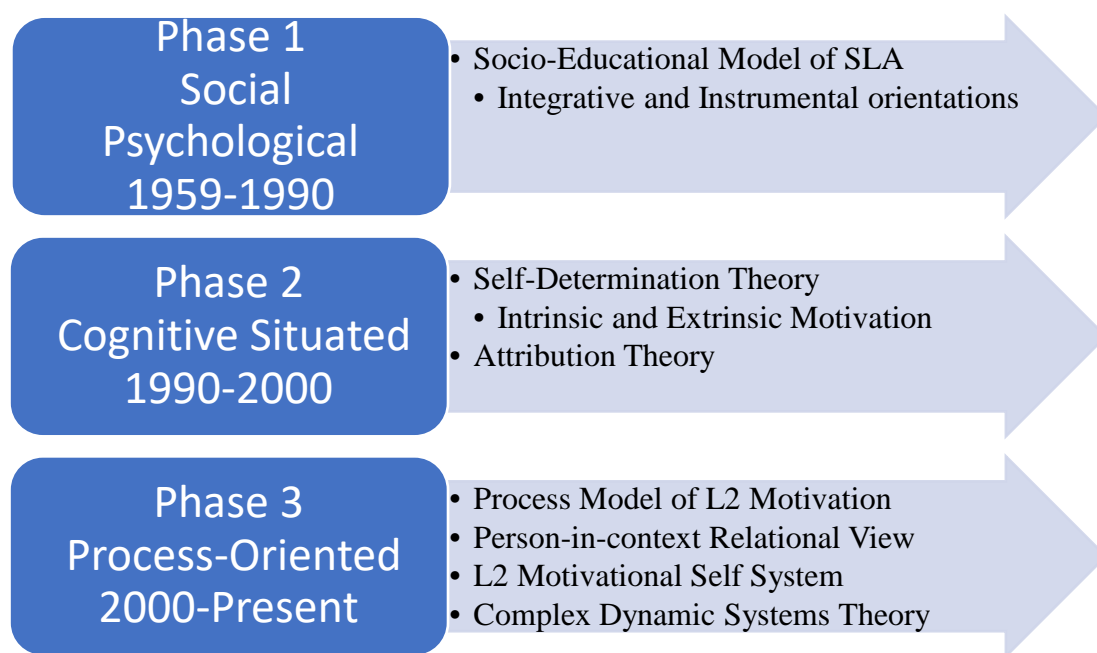
Figure 2.1 Historical phases of L2 motivation research

Advances in the conceptualization and theorizing of L2 motivation have largely

occurred as a result of larger shifts in theories of education and psychology. It is

unsurprising that the first concepts of L2 motivation were situated in the middle of

the "cognitive revolution" (Overskeid, 2008, p. 131) in which cognitivism began to

edge out against behaviorism as the preferred theory for understanding the learning

process (Paciotti, 2013). As Svinicki (1999) observed:

> because behaviorists originally believed that behavior was caused solely by
> past contingencies, motivation, which implied a looking ahead or anticipation
> of future consequences, couldn't really exist. A learner engaged in a behavior
> not in anticipation of being reinforced when he finished but rather because
> that behavior had been reinforced in the past (p. 19).

With the retreat of behaviorism, cognitivism influenced social psychology (Hogg & Vaughan, 2018) and it is against this backdrop that new language acquisition theories, such as Chomsky's (1959) internalist theory of generative grammar, and new contributions towards understanding L2 motivation arose.

Section 2.2.1 Social-Psychological Phase

One such contribution that would have a lasting influence on L2 motivation research even until the present day is the work of Gardner and Lambert (1959, 1972) who introduced of the concepts of integrative and instrumental orientations. Their work integrated social psychology with language learning motivation, highlighting the importance of the social context of the language learner.

Integrative motivation refers to L2 learners' attitudes towards a particular L2 community and their desire to integrate with such community. In the words of Gardner (1985b), "students' attitudes toward the specific language group are bound to influence how successful they will be in incorporating aspects of that language" (p. 6). Gardner (2001) later described the concept of integrativeness as reflecting "a genuine interest in learning the second language in order to come closer to the other language community" (p. 5), which implies "an openness to, and respect for other cultural groups and ways of life" (p. 5). The motivation of a student to improve his or her skills in a language is, therefore, according to Gardner, influenced to a large degree by the student's desire to integrate with the community of target language speakers and the student's attitudes toward the learning situation.

Instrumental motivation refers to the desire to learn a language because of the practical benefits it affords (Gardner, 1979; Gardner & Lambert, 1972). As an example, consider non-native English-speaking students learning English in order to pass college entrance exams. A college education affords access to knowledge, skills, and networks that can enable the students in their careers by potentially helping them secure more lucrative and prestigious job positions that would otherwise be unavailable to them.

Gardner would refine his views and research methodology over the next four decades (Gardner, 1985a, 1985b, 2001, 2004, 2010; Gardner & MacIntyre, 1993), promoting a L2 motivation research instrument entitled the Attitude/Motivation Test Battery (AMTB) as well as promoting the Socio-Educational Model of Second Language Acquisition. According to this model (see Figure 2.2), motivation is considered to be an affective individual difference variable that is influenced by language attitudes and language anxiety. Motivation is also viewed as having a negative correlation with and causal influence on language anxiety. Lastly, motivation is instrumental in shaping the willingness of students to engage in both formal and informal language acquisition contexts, ultimately affecting the linguistic and non-linguistic outcomes of the students' language learning efforts.

Socio-cultural milieu

Antecedent factors | Individual difference variables | Language acquisition contexs | Outcomes

Intelligence

Language aptitude

Strategies

Biological

Experiential

Language attitudes

Motivation

Language anxiety

Formal

Informal

Linguistic

Non-linguistic
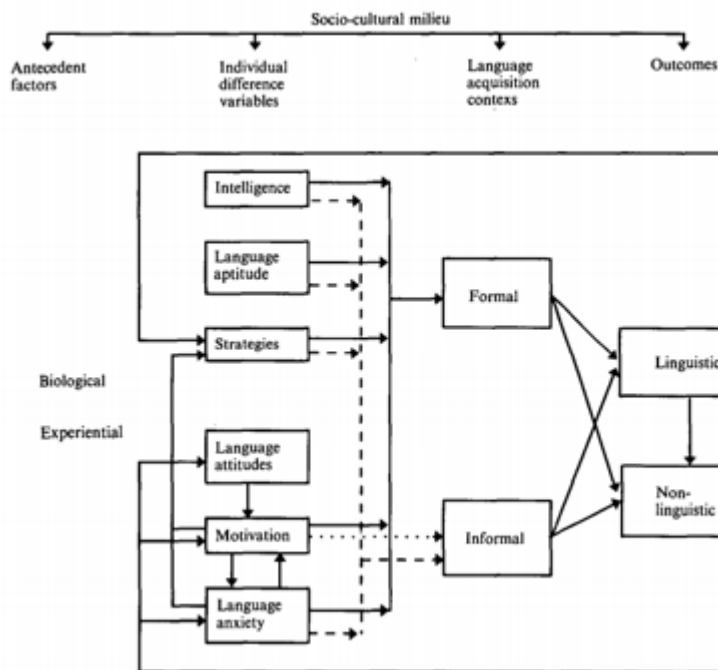
Figure 2.2 Gardner's Socio-Educational Model of Second Language Acquisition (Gardner & MacIntyre, 1993, p. 8)

The Socio-Educational Model of Second Language Acquisition is not without criticism. As Dörnyei (2009a) noted, the importance of integrativeness and its role of stimulating and maintaining L2 motivation has merit when considering the multicultural setting of Montreal, where Gardner developed his theory. Other contexts where students are taught a foreign language without any direct contact with the speakers of the language, however, have led to a growing number of scholars questioning the usefulness of the concept of integrativeness for understanding language learning motivation.

This growing dissatisfaction with the concept of integrativeness and the integrative motive within the Socio-Educational Model of Second Language Acquisition is in large part due to worldwide globalization and the growing importance of English as an international language (Coetzee-Van Rooy, 2006; Dörnyei, 2009a; Dörnyei,

Csizér, & Németh, 2006). Ushioda and Dörnyei (2009) summarized the concern that many scholars had regarding the integrative motive by asking if "we can apply the concept of integrative orientation when there is no specific target reference group of speakers" (p. 2) and if "the notion of integrative motivation for learning English [has] any real meaning, given the increasing curricular reframing of English as a universal basic skill to be taught from primary level alongside literacy and numeracy" (p. 3).

This line of questioning is logical when one considers the context of many English language learners in the world today. Take China, a country which was estimated to have 390.16 million learners of English in 2000 (Wei & Su, 2012) to possibly over 400 million learners of English in 2010 (Na, 2010), as an example. While many Chinese students begin studying English in preschool, many of these students may not harbour any intention of integrating with a foreign English speaking culture. For many of these students, English may merely be a subject to study in order to pass the *Gaokao,* or college entrance exam.

While the integrative motive alone does not adequately account for language learning motivation in all contexts, it still remains an important concept within the research area of L2 motivation today, especially in contexts where the learner has a clear target language community or community of practice (Lave & Wenger, 1991). Non-native English university biology students who wish to pursue a career in academia, for example, may be motivated to learn English because they want to join the academic community comprised of experts in biology from around the globe. Their desire to integrate with the target community, by traveling to conferences, discussing research

findings, and publishing papers in academic journals, demonstrates how integrative motivation is still a relevant concept today.

What can be concluded is that, despite integrativeness being an important concept in L2 motivation in specific contexts that include a clear target community, as a general model for understanding motivation, the Socio-Educational Model of Second Language Acquisition, with integrative motivation as its lodestar, does not account for L2 motivation in all contexts. As a result, researchers in L2 motivation began to explore other ways to understand L2 motivation across different contexts. Some of the more compelling theories are delineated below.

Section 2.2.2 Cognitive-Situated Phase

With their article on 'reopening the motivation research agenda', Crookes and Schmidt (1991), ushered in the cognitive-situated period of L2 motivation research, which Dörnyei and Ryan (2015) describe as a realignment with educational psychology. Crookes and Schmidt (1991) argued that research in motivation and SLA had been limited in its scope because of the narrow focus and reliance on a social-psychological approach and because of the failure to distinguish between learner attitudes toward a target language community and L2 motivation. The authors laid out a new research agenda, challenging researchers to leverage a wider variety of research methodologies and consider alternative, non-social-psychological approaches to understanding L2 motivation. With the social-psychological blinders removed, focus shifted from the macro perspective of L2 motivation (such as integration to new communities) to a more micro perspective of learning situations, including classrooms, teachers, the curriculum, and groups of learners. This change in focus was accompanied by the

adaptation of cognitive concepts, models, and theories, such as such as Piaget's (1964) stage theory of cognitive development and Vygotsky's (1978) sociocultural cognitive model. Two cognitive theories of motivation of particular note that arose from this realignment with cognitivist theories of psychology and education are Self-Determination Theory and Attribution Theory.

Deci and Ryan's (1985, 2009), see also Ryan and Deci (2002), Self-Determination Theory suggests there are three universal psychological needs: competence, which relates to feeling capable and experiencing mastery; relatedness, which is the feeling of being connected with others; and autonomy, the feeling that one is in control of his or her actions. Relating this to L2 motivation, L2 learners may be motivated to learn a language as a means to satisfy the psychological needs of competence (feeling accomplished from learning a language), relatedness (being able to connect with others who speak the L2 or camaraderie experienced when learning the L2 with others), and autonomy (being able to take advantage of opportunities the L2 affords that would be otherwise unavailable).

Additionally, Self-Determination Theory distinguishes between two forms of motivation: intrinsic and extrinsic. The former being based on "intrinsic needs for competence and self-determination" (Deci & Ryan, 1985, p. 32) that "keep people involved in ongoing cycles of seeking and conquering optimal challenges" (p. 33) which enable cognitive and social development. The later, extrinsic motivation, as the name suggests, comes from external sources such as rewards or punishments given by others. For example, a student who studies English because they enjoy the challenge of learning a language is intrinsically motivated, while a student who

studies English because they fear being punished by their parents for low marks is extrinsically motivated.

Deci and Ryan's psychology theory of self-determination was leveraged for researching L2 motivation by Noels, Clément, and Pelletier (1999, 2001) and later refined by Noels (2001, 2003, 2009); Noels, Pelletier, Clément, and Vallerand (2000). Noels et al. (2000), for example, developed the Language Learning Orientations Scale to study intrinsic and extrinsic motivation within the domain of L2 motivation. They suggest that intrinsic motivation lies on a continuum separate from extrinsic motivation, with the two forms of motivation being related to each other. The authors argue that intrinsic and extrinsic motivation, two constructs borrowed from Self-Determination Theory, are valid constructs in the L2 domain.

The result of these studies that leverage Self-Determination Theory to explore L2 motivation is that another piece of the L2 motivation puzzle has been placed on the board. Whereas the Socio-Educational Model of Second Language Acquisition highlighted the importance of the L2 learner and the communities they would like to be a part of, the fruits of Self-Determination Theory and its application to the field of L2 motivation is the realization that L2 motivation can come from cognitive factors within the learner as well as from micro-contextual factors. While neither theory alone adequately accounts for the myriad of factors, internal and external, that affect L2 motivation, together they begin to paint a picture that L2 motivation is complex, multifaceted, and influenced by both learners' cognition and learning environment.

Another important theory that arose during the cognitive-situated period that would have a lasting influence on research in the field of L2 motivation was Attribution Theory. Building on the work of Heider (1958), Weiner (1985, 1986, 1992, 2010) argued that an individual's motivational disposition, and by connection, future actions, are shaped by how the individual attributes past experiences. As seen in Figure 2.3, the outcome of a particular event (e.g. failing an L2 class final exam) will result in an individual feeling a particular way (e.g. negative, frustrated). This may, in accordance with specific causal antecedents (e.g. a history of not performing well in school), influence the individual's decision to ascribe the outcome to a particular reason (e.g. attributing failure due to low-ability). This in turn has psychological and behavioural consequences (e.g. thinking that one is not good at learning languages, and therefore making the decision to not enrol in another language course again). In other words, how individuals ascribe experiences in the past serves as a link to how the individual will think and behave in the future. In the words of (Weiner, 2010), "the interpretation of the past, that is, the perceived causes of prior events, determines what will be done in the future" (p. 29).
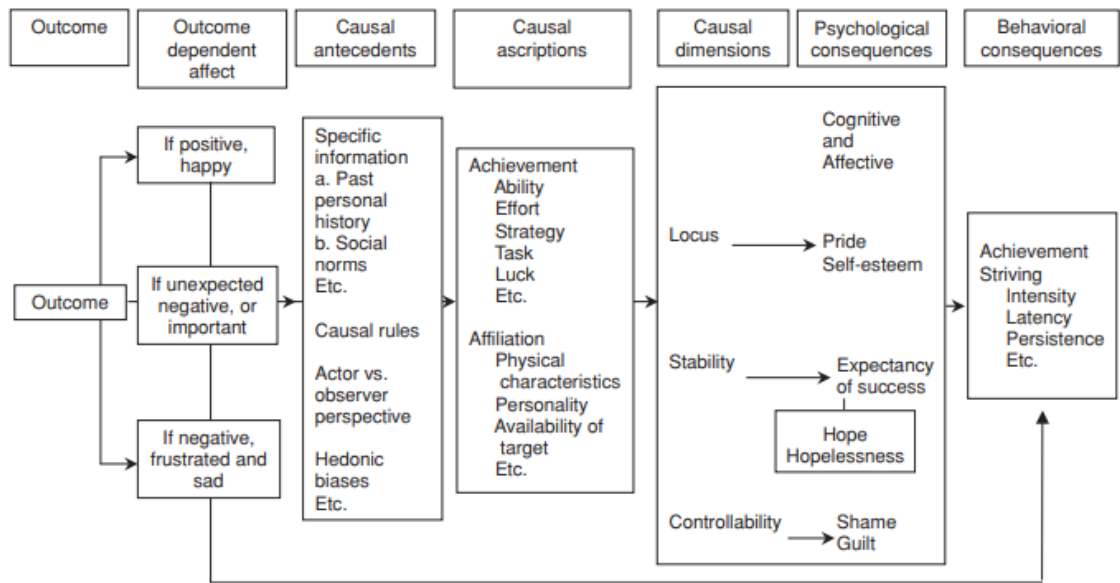
Figure 2.3 Weiner's final Attribution-Based Theory of Intrapersonal Motivation (Weiner, 2010, p. 34)

Weiner's Attribution Theory, and its application to research on L2 motivation by

scholars such as Ushioda (1996, 1998, 2001), have shaped research methodology and

theory in L2 motivation in two ways (Dörnyei & Ryan, 2015). First, it led to a

growing interest in leveraging qualitative research methods to understand L2

motivation (see for example Tse, 2000; Williams & Burden, 1999; Williams, Burden,

& Al-Baharna, 2001; Williams, Burden, Poulet, & Maun, 2004), breaking free of the

standard quantitative methodology employed by psychology researchers, cognitive

psychology included. Second, Attribution Theory drew attention to the importance

of understanding L2 motivation as not a static, but as a dynamic concept in time,

thereby setting the stage for process-oriented models and theories for understanding

and researching L2 motivation.

Section 2.2.3 Process-Oriented Phase

In an attempt to understand how L2 motivation functions as a dynamic factor of L2

learning that is influenced by context and time, several models and theories have

arisen in what can be labelled as the process-oriented period. These include, but are

not limited to, Dörnyei and Ottó's (1998) process model of L2 motivation, Ushioda's

(2009, 2012) person-in-context relational view, Dörnyei's (2005, 2009a) L2

motivational self system (L2MSS), complex dynamics systems theory (CDST)

(Dörnyei, 2009b; Dörnyei, MacIntyre, et al., 2015b), and directed motivational

currents (Dörnyei, Henry, & Muir, 2016; Dörnyei, Muir, & Ibrahim, 2014; Dörnyei,

Z., & Muir, 2015; Muir & Dörnyei, 2013).

These views of L2 motivation, while each unique in its approach and application,

maintain certain commonalities. The most important commonality is the

reconceptualization of L2 motivation as being socio-dynamic, being affected by both

time and the context of the L2 learner. According to these models, L2 motivation is

not seen as a static attribute, rather it is seen as a dynamic factor often in a state of

fluctuation. In the next sections Dörnyei's L2MSS, and CDST will be discussed in

greater detail.

Section 2.3 L2 Motivational Self System

The L2MSS (Dörnyei, 2005, 2009a) is a tripartite model of L2 motivation that relies

on the psychological theories of Markus and Nurius's (1986, 1987) possible selves

and Higgins's (1987) Self-discrepancy Theory. According to this model, motivation

is the result of an individual's desire to reduce the discrepancy between his or her

possible selves and his or her current state. Possible selves are imagined self-

identities that refer to future self-states and are often referred to as future self-guides (Dörnyei, 2009a; Ossyerman, Bybee, & Terry, 2006) as they can potentially motivate one to make efforts to align their current self-state with their ideal or ought to selves (Higgins, 1987, 1998; Higgins, Klein, & Strauman, 1985; Higgins, Roney, Crowe, & Hymes, 1994; Hock, Deshler, & Schumaker, 2006). The tripartite components of the L2MSS include:

1. The Ideal L2 Self, which refers to "the L2-specific facet of one's ideal self" (Dörnyei, 2009a, p. 29). If being competent in a L2 is an important component of the imagined ideal self, then the ideal L2 self can serve as a powerful motivator to learn the L2. This is because the individual may desire to reduce the discrepancy between their current actual self-state and their ideal self, and this desire to reduce the discrepancy between actual and ideal selves may lead the learner to put in the effort required to learn the L2. Dörnyei suggests that integrative and internalized instrumental motives belong to this component of the L2MSS.

2. The Ought-to L2 Self encompasses "the attributes that one believes one ought to possess in order to avoid possible negative outcomes" (Dörnyei, 2009a, p. 29). This component of the L2MSS relates to extrinsic types of instrumental motives.

3. The L2 Learning Experience – which includes "situation-specific motives related to the immediate learning environment and experience" (Dörnyei, 2009a, p. 29).

The L2MSS attempts to capture the multifaceted nature of L2 motivation by taking into account three primary sources of motivation (the tripartite components of the model) and has been validated by empirical research conducted in a variety of learning environments (Al-Shehri, 2009; Campbell & Storch, 2011; Taguchi et al., 2009), including China (Q. Li, 2014; Taguchi et al., 2009; You & Dörnyei, 2016; You, Dörnyei, & Csizér, 2016). It is considered to be one of the most accepted theoretical paradigms for recent L2 motivation research (Boo et al., 2015).

Al-Hoorie (2018) conducted a meta-analysis that included 32 research studies on the L2MSS. He found that all components of the tripartite model (the ideal L2 self, the ought-to L2 self, and the L2 learning experience) were significant predictors of intended effort (rs = .61, .38, and .41), and predictors of achievement (rs = .20, -.05, and .17), thereby suggesting that the Ideal L2 Self is the most important of the three.

Despite being a widely accepted theoretical paradigm for understanding L2 motivation, the effectiveness of possible selves as L2 motivators depends on certain conditions being met. These include, for example, whether an individual maintains an ideal self-image, whether that image is elaborate and vivid, and whether the image is different enough from the actual self (Dörnyei & Ushioda, 2011; Hessel, 2015; Irie & Brewster, 2013). Additionally, the importance of L2 identity in certain EFL contexts has been questioned as such contexts may not provide enough exposure and access to the target culture to enable students to imagine ideal selves in which no L2 facet has materialized (Xu & Gao, 2014). Additionally, the L2MSS has been

criticized as being based on the assumption that learners are goal-oriented rational beings, when some findings suggest that identity changes may not be formulated until after learning experiences have occurred (Xu & Gao, 2014).

Perhaps the greatest problem with the L2MSS is not the model itself, but with the methodology often employed by researches who utilize the L2MSS as a model for framing their L2 motivation research. The overreliance of researchers in utilizing quantitative research instruments that measure motivation levels at one point in time often results in the portraying of possible selves as static constructs. Viewing identity constructs as static fixed goal posts, runs contrary to the initial conceptions of self-guides (Higgins, 1987; Markus & Kunda, 1986; Markus & Wurf, 1987), and the findings by others (Darvin & Norton, 2018; Norton, 1997, 2015; Norton & Gao, 2008).

While it is beyond the scope of this chapter to address every model or theory leveraged in L2 motivation research, the reason why the particular models and theories above have been summarized is twofold. First, these theoretical frameworks have had a lasting impact on the conception of L2 motivation as well as the methodologies behind L2 motivation research. While some of the models, like Gardner's Socio-Educational Model of SLA may have fallen out of favour, the concepts incorporated in the model, namely integrativeness and instrumentality, are to this day considered valid constructs and are still employed by L2 motivation researchers. Second, having a basic understanding of the models and theories summarized above enables the reader to understand how the current study fits in the context of the progression and evolution of how L2 motivation has been

conceptualized by different researchers over the past sixty years. To summarize this process, L2 motivation has evolved from being viewed as a static attribute and variable in learners' cognitive individual differences and is more recently being perceived as a multifaceted, complex, dynamic variable in a complex system that is inseparable from the learners' environment as it is subject to influence from other environmental or contextual factors across time.

In order to avoid the pitfall of framing L2 identity (and the motivation that hinges on that identity) as static constructs, scholars have highlighted the advantages of adopting principles from Complex Dynamic Systems Theory (CDST) (Larsen-Freeman, 2015), such as utilizing timescales of different lengths (de Bot, 2015; Henry, 2015; MacIntyre & Serroul, 2015), as well as using a variety of research methodologies, including more longitudinal studies (Xu & Gao, 2014), to capture "moving pictures" instead of "photographic stills" of L2 self guides (Henry, 2015, p. 93). In order to help the reader gain a better understanding of why motivation is considered to be complex and dynamic, the subsequent section will briefly describe CDST.

Section 2.4 Complex Dynamic Systems Theory

As mentioned in the introductory chapter of this thesis, Larsen-Freeman (1997, 2002, 2012) introduced non-linear dynamic systems to SLA research. This was subsequently followed by emergentism (Ellis & Larsen-Freeman, 2006b), dynamic systems theory (de Bot et al., 2007) and complexity theory (Larsen-Freeman & Cameron, 2008a). The abbreviation "CDST" is now widely utilized by SLA

researchers to refer to these complementary foci (e.g. chaos theory, complexity theory, emergentism, dynamic systems theory) (Hiver & Al-Hoorie, 2016).

While some SLA scholars may have initially been slow to heed Larsen-Freeman's (1997) call for adopting a CDST approach to researching SLA (Gregg, 2010; Larsen-Freeman, 2007), the "alternative approach" (Atkinson, 2011, p. 16) of CDST to the mainstream cognitivist approach to understanding SLA has now been leveraged in a variety of domains including multilingualism (de Bot, 2012; Jessner, 2008), Educational linguistics (Hult, 2010), conversation analysis (Seedhouse, 2010), L2 pedagogy (Mercer, 2013), sociolinguistics (Blommaert, 2014), and English as a lingua franca (Baird, Baker, & Kitazawa, 2014). Furthermore, there are a growing number of empirical studies that leverage CDST in learner language development (Larsen-Freeman, 2006; Lowie & Verspoor, 2015); lexical development (Ellis & Larsen-Freeman, 2009; Verspoor, Lowie, & van Dijk, 2008), willingness to communicate (MacIntyre & Legatto, 2011), L2 writing (Baba & Nitta, 2014; Verspoor, Schmid, & Xu, 2012), L2 anxiety (Gregersen, MacIntyre, & Meza, 2014), and L2 motivation (Dörnyei, MacIntyre, et al., 2015b). Additionally, special issues in *Applied Linguistics* (Ellis & Larsen-Freeman, 2006a)*, Bilingualism: Language and Cognition* (Green, Li, Meisel, & Silva-Corvalan, 2007), and *Modern Language Journal* (de Bot, 2008) have been published on emergentism, dynamic systems theory, and complexity theory respectively. Edited volumes on a dynamic approach to second language development (Verspoor et al., 2011) as well as complexity theory and language development (Ortega & Han, 2017) have also been published in recent years.

The growing interest amongst researchers of L2 motivation in leveraging dynamic principles for SLA research has led to a reconceptualization of the L2MSS through the lens of CDST (Henry, 2015), as well as the utilization of diverse methodologies to investigate motivational dynamics, such as change point analysis (Nitta & Baba, 2015), idiodynamics (MacIntyre & Serroul, 2015; Mercer, 2015), latent growth modeling (Piniel & Csizér, 2015), Q methodology (Irie & Ryan, 2015), qualitative comparative analysis (Hiver, 2015b), retrodictive qualitative modeling (Dörnyei, 2014; Chan, Dörnyei, & Henry, 2015), trajectory equifinality (Yashima & Arano, 2015) , variability analysis (Piniel & Csizér, 2015), and mixed methods for triangulation of data (Gregersen & MacIntyre, 2015; Nitta & Baba, 2015; You & Chan, 2015).

With the explosion of interest in leveraging dynamic principles and CDST in L2 motivation research, it appears that, to quote Gregg (2010) from his own critique of Larsen-Freeman and Cameron's (2008a) book *Complex systems and applied linguistics,* "it would seem that the seed Larsen-Freeman planted has finally germinated; and it might be a good time to take a closer look at what [Larsen-Freeman and Cameron] think complexity theory can tell us" (p. 550). Before taking an in-depth look at CDST guided empirical studies on motivational dynamics, however, an explanation of what a CDS actually is may be of use to readers unfamiliar with the field.

Section 2.4.1 What is a Complex Dynamic System?

According to van Geert (2008), a system is "any collection of identifiable elements-abstract or concrete-that are somehow related to one another in a way that is relevant

to the dynamics we wish to describe" (p. 180). A CDS is "a set of variables that mutually affect each other's changes over time" (van Geert, 1994, p. 50). Dörnyei (2014) listed three criteria for a CDS: "A system is considered complex or dynamic… if (a) it has at least two or more elements that are (b) interlinked with each other but which also (c) change independently over time" (p. 81). It is important to note, however, that CDSs usually have far more than two elements, and it is the non-linear relationship between the multiplicity of elements that leads to CDSs being unpredictable.

CDSs can be found all around us in natural phenomena and appear in a diverse array of professional fields. Examples of complex dynamic systems include the global climate, ecosystems, population sizes, biological organs, and the flocking behaviour of birds. These complex systems share commonalities such as emergence, nonlinearity, and adaptation. Terminology and characteristics of CDSs will be discussed in the next section.

Section 2.4.2 Terminology and characteristics of complex dynamic systems
 As pointed out by MacIntyre, Dörnyei, and Henry (2015), one of the major difficulties of adopting a CDS approach to research is the need to learn the terminology utilized for describing CDSs. The following subsections will explain the terminology and characteristics of CDSs, so that the reader may more fully understand the extant literature reviewed below, as well as the current study.

Section 2.4.2.1 Terminology

CDST related terminology that will be defined in this subsection include *system state, trajectory, state space, attractor state, fixed-point attractor, periodic attractor, strange attractor, basin of attraction, system dynamics, self-organization, feedback, perturbations,* and *system parameters.*

Spatial metaphors are often employed to describe the processes of change and development of CDSs (Larsen-Freeman & Cameron, 2008a). Because elements within a CDS are dynamically interacting (frequently changing and influencing each other), the *state* of a system will also frequently change. The sequence of states of a system is referred to as the system's *trajectory.* The states of the system can be said to change in time and in location of the state space. The *state space,* sometimes called the *phase space*, is a metaphorical landscape of the "total possible outcome configurations that a system can be found in at any given time, within which a system can transition along a unique trajectory" (Kauffman, 1995, as cited in Hiver, 2015a). The *state* of the system is the system at a particular location and time in its trajectory, and it is the object under study.

 At some points in its trajectory, a CDS may enter an *attractor state*. An attractor state is "a critical value, pattern, solution or outcome towards which a system settles down or approaches over time" (Newman, 2009, as cited in Hiver, 2015a, p. 21). A system is considered to be located at an attractor state when the interplay of systems, subsystems, and system components interact in a way that a sort of stability or pattern *emerges* in the system. As Hiver (2015) notes, "a patterned outcome of self-organisation represents a pocket of stability for the dynamic system, and it can emerge without anyone purposely directing or engineering it" (p. 21). There are

different types of attractor states, and these are referred to as fixed-point attractor

states, periodic attractor states (sometimes referred to as limit-cycle attractor states),

and strange attractor states (sometimes labelled chaotic attractor states).

A *fixed-point attractor state* is a state of the system in which a point of equilibrium

has been reached, resulting in a period of stability. Even when a CDS is in a stable

fixed-point attractor state, the system still continues to change as the components or

agents continue to dynamically interact (Larsen-Freeman & Cameron, 2008b). Here

the behaviour of flocking provides an easily understandable example; a relatively

stable flight pattern, such as when geese may flock in a V formation is a dynamically

stable state. It is important to note, however, that systems usually do not have one

single fixed-point attractor (Bryne, 1998).

While a fixed-point attractor represents one value or state of the system, a *periodic*

attractor state or *limit-cycle attractor state* represents two or more values in which

the nature of the systems development is cyclical, as the trajectory transitions

between these periodic attractor states. Patterns may become discernible as the

system's trajectory begins to fall into an iterative path (Abraham & Shaw, 1992).

It is possible that a system approaches an attractor state overtime without ever

actually reaching it. This kind of attractor state is referred to as a *strange attractor*

state, or *chaotic attractor state* and they are the most frequently found type of

attractor states (Kelso, 2002). It has been suggested by Hiver (2015a) and Henry

(2015) that possible self-guides in the L2 Motivational Self System (L2MSS) may be

conceptualized as strange attractor states as they act like "a moving target as progress

is made toward goals and new, more challenging goals are constructed" (Henry, 2015, p. 27).

The trajectory of a system as it gravitates towards various attractor states is frequently compared to a ball traversing a landscape of peaks and valleys (see Figure 2.4) (van Dijk & van Geert, 2015). Scholars de Bot and Larsen-Freeman (2011) describe the metaphor in this way:

> The metaphor used to explain attractor states is that of a surface such as that of the moon, partly smooth, partly with holes and mountains. A ball rolling over that surface will be "attracted" to the holes and be "repelled" by the mountains. Once a ball is in a hole, it takes much more energy to make it move again than to keep it rolling over the smooth surface. Related to this is the notion of "basins of attraction"… this indicates that there are not only holes, but also slightly depressed plains forming shallow bowls. The distance to the attractor state itself can be fairly long and it may take quite some time to reach it, but once the system is in the basin of attraction it will continue to move in that direction. Basins of attraction can take many forms, from depressed plains to river-like meandering forms. (p. 15)

 Attractor states are described as having a width and depth that influence the strength of the attractor state on the development of the system (van Dijk & van Geert, 2015). The width of an attractor valley refers to "the range of initial conditions that lead the system to the same attractor point" (p. 40). The depth of an attractor refers to the "strength of the 'gravitation' on behavior that leads to relative stability" (p. 40). Strong attractor states are described as deep or wide, and weak attractor states are described as shallow.
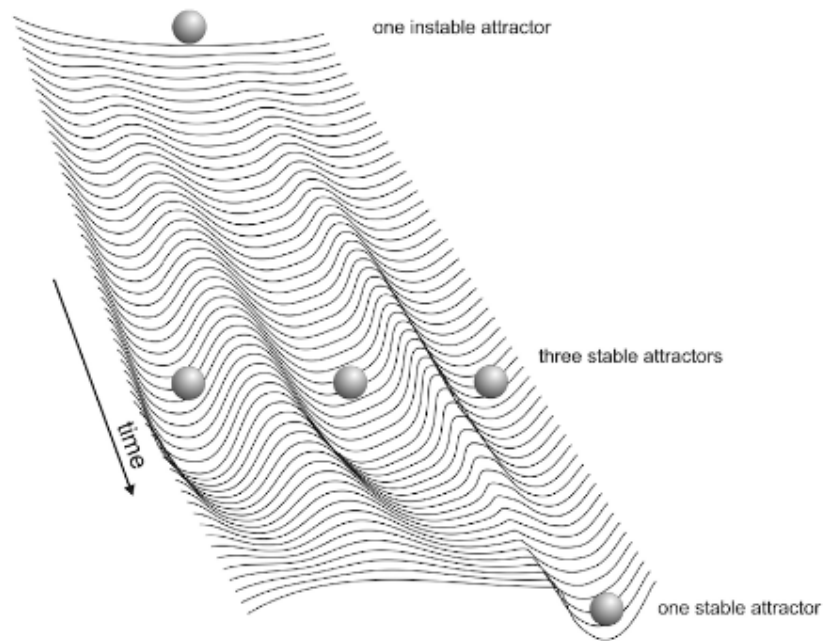
Figure 2.4 Attractor landscape with attractor states (de Bot & Schaurf, 2009)

It is important to note, however, that such spatial descriptions of CDSs, are

metaphorical and not physical. If L2 motivation is viewed as a CDS, for example, it

makes little sense to think that the system physically moves, as motivation is an

abstract concept within the individual. The leveraging of spatial metaphors for

describing a system's trajectory across a state space is merely a way to aid in the

conceptualization of how the CDS functions and changes over time. This is critical to

understand as the tendency to refer to system states and attractor states as having a

location, strength, width, etc., has led to, in the author's opinion, some incorrect

conceptualizations of how L2 motivation may be viewed as a CDS. This point,

however, will be addressed later after the characteristics of CDSs have been more

fully described.

For now, it is enough to note that most attractor states of a system are just states of

the system's development (systems never reach strange attractor states); attractor

states do not have a physical location and do not 'attract' a system in the physical sense of pulling. The importance of language used in describing and understanding attractor states has been emphasized by Hiver (2015a):

> The term *attractor state* is simply a convenient way to describe the behavior of a dynamic system as it moves towards some, and away from other, critical patterns (Holland, 1995). While in the complexity literature both terms are used [attractors and attractor states] in an interchangeable manner, in order to avoid the tempting – and misleading – collocation that attractors *attract*, it would perhaps be better to refer unilaterally to attractors as 'attractor states'. It also is worth mentioning that attractor states are not necessarily perceived as pleasant or desirable states that a person wishes to be in. (p. 21)

Other scholars have echoed the call to be careful about how CDS terminology is used, particularly when describing attractor states: "Attractors do not attract, they simple are. Attractors are not magnets" (de Bot, n.d., cited in MacIntyre et al., 2015, p. 422). Part of the confusion may stem from the fact that many researchers are used to approaching research from a reductionist angle that relies on analysis of isolated variables in linear relationships. Byrne noted that attractor states are not variables, stating "An attractor is very different from a variable. The term 'attractor' is simply used to describe a possible state of a system. As such we can think of it as a domain in the possible (state) space" (Byrne, n.d., cited in MacIntyre et al., 2015, p. 422). MacIntyre et al. (2015), well established scholars in the field of L2 motivation, have admitted that learning how to use CDS terminology correctly has proven to be a challenge for researchers. They warn that researchers exploring CDST and motivation "have to come to think of attractors exclusively as system outcome states" (MacIntyre et al., 2015, p. 422). What the scholars quoted above are trying to highlight is that describing CDSs as a metaphorical landscape may influence

researchers to mischaracterize or misconceptualize CDSs by swapping out metaphorical meanings with physical meanings. An analysis of problematic language use leading to misconceptualization of L2 motivation as a CDS in empirical studies related to motivational dynamics will be discussed momentarily, as a few more terms related to CDSs and the characteristics of CDSs need to be explained.

A system arrives at a particular attractor state because of the way the system dynamics self-organize (Hiver, 2015a; Juarrero, 1999). *System dynamics* are changes in the system that arise from the interactions of system components (Kelso, 2002). *Self-organization* occurs when a system restructures its components and connections through feedback (Holland, 1995). *Feedback* can originate from components within the system or an external source, and it is instrumental in whether a system moves closer or further away from an attractor state (Hiver, 2015a). Negative feedback minimalizes variance from an attractor state; positive feedback increases variance from an attractor state. *Perturbations* are forces that can disturb the relative stability of the dynamic system by knocking it loose from its current attractor state (Kra, 2009). A hawk entering the scene will certainly disrupt the relative stability of flocking starlings, for example. Lastly, *system parameters* are "the specific principles, constraints or rules which govern the interactions between system components and the patterns of change that take place" (Bak, 1996)

Having described much of the terminology related to CDST, the following sections will highlight some salient characteristics of CDSs, as well as explain how these characteristics make the adopting of CDST for empirical studies challenging. This

background knowledge on CDST will help readers make light of the CDST literature that will be reviewed later on.

Section 2.4.2.2 Complete Interconnectedness

Complete interconnectedness means exactly what the term suggests – all parts of a dynamic system are connected to all other parts (de Bot & Larsen-Freeman, 2011). Consider the flocking behaviour exhibited by a group of birds, such as starlings, in flight (Feder, 2007). The starlings make up the system's components or agents. Maintaining a distance from neighbours in order to avert collisions with other birds, one starling adapts its heading and position in conjunction with the heading and position of the birds around it. Each of the surrounding birds must likewise make adjustments to maintain cohesion within the flock, thereby establishing a network in which all birds of the flock are interconnected.

Any alteration of flight by one bird will affect its neighbouring birds. As those neighbouring birds change their flight patterns, other birds will again need to readjust their trajectory. While one bird may only share direct connections with birds immediately around it, its behaviour still influences birds more distant in the flock. This particular bird is likewise affected by the slight changes in trajectories of the other birds both distant and near. The influence of one bird ripples across and back the network of birds, thereby establishing a feedback loop in which all birds are interconnected.

The example of flocking starlings also shows how one system (the flocking birds) can be situated in another system, such as the weather, which is the emergent result

of an array of system components. Systems that are located in larger systems are called nested systems. Interconnectedness between components of a system and between different systems does not mean that changes have the same impact on all components within a system or other related systems. The wind for example, has a far greater impact on the birds than the birds have on the wind.

This complete interconnectedness between systems, subsystems, and components within systems presents a challenge for researching L2 motivation from a CDS perspective. As de Bot & Larsen-Freeman (2011) put it: "How can you study a system and its subsystems when everything is interconnected?" (p. 11). Consider the outcome of a particular activity in the context of a language learning classroom. The success of a lesson requires various agents, such as the teacher, groupmates, friends, and other students, to collaborate together. Students' willingness to participate and contribute may be influenced by the actions of the other students around them.

Section 2.4.2.3 Nonlinearity in Development

Nonlinear change often occurs in the development of CDSs. Linear cause-effect relationships, in which an increased input will result in a proportional increase in the output, are not usually found in CDSs (Dörnyei, 2014). Cameron and Larsen-Freeman (2007), describe *nonlinearity* as when "the effect is disproportionate to the cause" (p. 227). In other words, when a change is made to the input, that change may not be proportional in the output. This is demonstrated by an hourglass containing grains of sand (Bak, Tang, & Wiesenfeld, 1987). Sand falls from the constricted neck of the hourglass down to the floor. In the beginning, each additional sand grain adds to the height of the pile of grains below it. At first it appears that the input has a

proportionate effect on the output. That is, each grain of sand adds to the height of the pile. Eventually the point is reached where the slope is too steep and the addition of one more grain of sand will lead to the pile collapsing. In this case, the input, one grain of sand, lead to a drastically different output, the collapsing of the pile. This example demonstrates how the nonlinearity of the system is related to the dynamic interaction and complete interconnectedness of the components of the system(s).

Similar to complete interconnectedness, nonlinearity also presents a challenge for researchers: "If the process [of development] is nonlinear, how is it possible to make any predictions that are likely to holdup?" (de Bot & Larsen-Freeman, 2011, p. 18). Again, referring back to the language classroom as an example, a teacher may begin classes with a joke. During the first class students might find the joke hilarious and this may endear the students to the teacher. In the next class, however, the joke might fall flat and have a no positive effect at all. Educators know that the same lesson plan and materials can be received completely differently by two groups of learners, or when the lesson is conducted in the first period or just before the lunch break. Nonlinearity and complete interconnectedness are closely associated with the initial conditions of the system.

Section 2.4.2.4 Sensitive Dependence on Initial Conditions

Initial conditions of a CDS are conditions of the system, and its sub-systems and components at the start of a particular time (MacIntyre & Gregersen, 2013; Verspoor, 2015). At the start of each of class, for example, each student is in a particular mindset and mood to study. This is why icebreaker activities are frequently used to get students on the same page and ready for the day's lesson.

The same force exerted on a nested system or component may vary in its effects, depending on the initial conditions (see Figure 2.5). A student who is depressed and demotivated at the start of class is more likely going to need more of a push to get out of a rut than a student who is feeling fresh and excited for the new day.
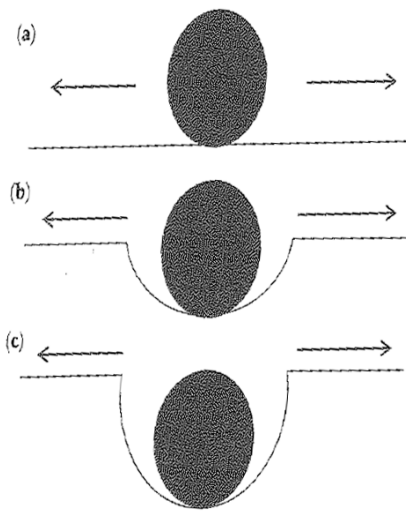
Figure 2.5 Examples of three different metaphorical initial conditions of a system (Verspoor, 2015, p.40).

Measuring all initial conditions may not be feasible and as such the initial conditions of learners pose a serious challenge for researchers, as noted by de Bot and Larsen-Freeman (2011): "if so much of SLD is dependent on initial conditions, and the initial conditions are many and variable, how is it possible to take all relevant factors into account?" (p. 18). This is particularly vexing from a reductionist/positivist view of research where every variable needs to be controlled in order to draw valid conclusions.

If a researcher, however, limits what variables can and cannot be included, then he or she is missing the larger picture of the CDS. A CDS, as will be discussed in the next few sections, is inseparable from its environment and is open and non-final; new factors can become a part of the system and the system will reorganize based on the influence of these new factors. In the author's opinion, researchers adopting a CDST approach need to accept that taking *all* the variables into consideration is not possible. Rather than observing the system through a laser-focused microscope, the researcher needs to take a step back from traditional positive approaches and take in an entire landscape, observing the ecosystem of variables rather than individual variables in isolation.

Section 2.4.2.5 Interaction with the Environment

 Environmental or contextual factors are inseparably intertwined with the system and its dynamics. CDSs are context dependent (Larsen-Freeman, 2015), they are nested in other, larger systems. Many scholars and L2 motivation studies suggest that the learner and the environment influence each other and co-adapt to one another (Dörnyei, 2009b; Ushioda, 2009, 2015; Verspoor et al., 2008; Waninge et al., 2014). While context has previously been generally viewed as an external independent background variable in L2 motivation research, a CDS approach does away with Cartesian dualism by erasing the conceptualized boundary between the individual and social environment, meshing the two together (Dörnyei, 2009b; Ushioda, 2009). The entwined nature of the learner and the environment may pose several challenges for researchers, as noted by Ushioda (2015):

> How narrowly or widely should we focus our contextual lens?... How do we integrate psychological and historical elements of context that are internal to the

learner before we decide that we are dealing with learner characteristics rather than contextual characteristics? (p. 49).

It is unsurprising that researchers may find it difficult to distinguish between learner characteristics and contextual characteristics because there is complete interconnectedness between parts of a system and, to use a metaphor related to photography, the researchers may be accustomed to using the prime (unable to zoom) lens of reductionism. The real challenge may not be distinguishing between learner characteristics and contextual characteristics but the need to abandon positivist thinking, removing the fixed-focus prime lens and replacing it by a CDST informed zoom-lens that accepts that learners and environments are intertwined and mutually influencing each other. Indeed, individual differences have their roots in complex systems (e.g. biological, cognitive, socio-cultural).

Section 2.4.2.6 Complex Dynamic Systems are Open and Nonfinal

A CDS is always open to new input from its environment, and therefore there is no final state of the system. The system will continue to self-organize in an autopoietic manner (Larsen-Freeman, 2015). It evolves; perturbed from its current attractor state the system is in a period of chaos and change, moving towards equilibrium at another attractor state. A system can suddenly and drastically be influenced by previously unknown or unseen variables. It adapts and adjusts to such feedback, reorganizing itself. For this reason, systems are labelled as open and non-final. Whatever research methodology is undertaken to study a system, then, needs to be flexible enough to account for unpredictable changes and the introduction of new factors.

Section 2.4.2.7 Dependence on Internal and External Resources

On reason why CDSs are ongoing and nonfinal is that they rely on internal and external resources (de Bot & Larsen-Freeman, 2011; van Geert, 2008; van Geert, Savelsbergh, & van der Maas, 1997). For a language learner, internal resources may include memory capacity, time to learn, and general health. External resources include material resources, technology, mentors, etc. Consider a student who, in a highly motivated state to study, becomes quite ill. It stands to reason that this motivational system is likely to be perturbed from this attractor state of high motivation if the learner's internal resources are expended. As the internal and external resources change, the system continues in its evolution.

It has long been recognized in psychology, for example, that motivation is linked to the needs of the individual. Maslow (1943), for instance, advocated the idea that there is a hierarchy of needs, with basic physiological and safety needs at the bottom needing to be met before higher level needs such as love, belonging, esteem, and self-actualization can be realized. Maslow's Hierarchy of Needs has been criticized by Hofstede (1980, 1984) as being ethnocentric. According to Hofstede, the ordering of needs into a universal hierarchy is a value choice, a choice that reflects the values of one's culture and upbringing. While academics have argued over what needs belong in the hierarchy and in what order, the possibility for emotional and physical needs to affect a learner's motivation should be readily apparent. If these emotional or physical resources are depleted, it stands to reason that motivation to study would likely decrease.

Section 2.4.2.8 Importance of Timescales

CDSs develop on different timescales (de Bot, 2015; Larsen-Freeman, 2015; Lemke, 2000). Looking at only at one time scale, such as changes in motivation over a semester, only paints one part of the picture. A student's motivation can fluctuate in different ways over different time scales. Examining one day may not provide answers about what is happening over the course of a semester, and vice-versa. It is for this reason that the trajectory of a CDS is fractal in nature with self-similarity in different nested levels (see Figure 2.6). To gain a more complete picture of a system's trajectory over time, multiple timescales should be considered.
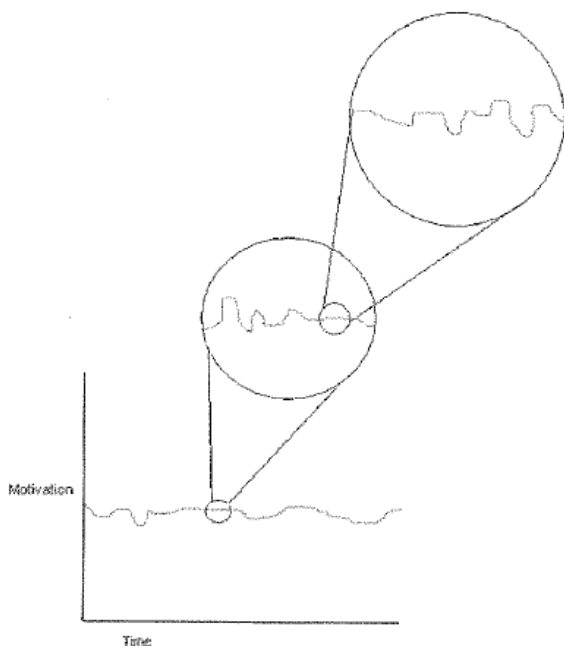
Figure 2.6 Fractal nature of changes of motivation over time (Frea Waninge, cited in Larsen-Freeman, 2015, p. 13).

De Bot (2015) highlights the challenge for researchers: "we cannot undo the interaction between timescales and study phenomena on one timescale without taking into account other timescales. But can we do research at all if we must include all possible timescales?" The author's answer to the question is yes, research can be

done, but researchers must change their expectations in regard to how research has to be conducted. As Cameron and Larsen-Freeman (2007) put it

> Taking a complex systems perspective involves some major changes in how we see aspects of the language classroom: we find that there can be no replication, no static independent and measurable "things" to measure, test, evaluate or codify, no limits to what might be relevant in understanding classroom and activity and behaviour. (p. 238)

They go on to suggest that information from systems at different scales need to undergo multiple types of analysis and that new ways are needed to "explore simultaneous activity on several scales (p. 238).

It is the author's opinion that researchers will not be able to account for every factor across every timescale. Researchers can, however, select timescales that are most relevant to the phenomenon being investigated, and leverage multiple types of data collection and analysis procedures that allow for the capturing of the dynamicity of the system and a great number of factors or agents within that system.

Having detailed the terminology and characteristics of CDSs, as well as highlighting some of the challenges of conducting CDST research, the next section will describe trends in Second Language Development (SLD) and CDS research related to language learner motivation.

Section 2.5 Trends in SLD and CDS Research

SLD research utilizing a CDS approach generally falls into two categories (de Bot, 2011). Studies relying on quantitative mathematical modelling and tools from the natural sciences are categorized as employing a hard approach, while those studies

utilizing metaphors from CDST to explore, interpret, and explain qualitative data are labelled as using a soft approach. Verspoor, de Bot, & Lowie's (2011) edited anthology *A dynamic approach to second language development: Methods and techniques* leverages the former approach. Dörnyei, MacIntyre, & Henry's (2015) edited anthology *Motivational Dynamics in Language Learning* features empirical studies of both hard and soft categories.

As noted in the introduction, there exists great variability in how SLD researchers are leveraging a CDS approach to research motivational dynamics in language learning. In addition to a reconceptualization of the L2MSS (Henry, 2015, 2017), there has been a diverse array of methodologies: change point analysis (Nitta & Baba, 2015), idiodynamics (MacIntyre & Serroul, 2015; Mercer, 2015), latent growth modeling (Piniel & Csizér, 2015), Q methodology (Irie & Ryan, 2015), qualitative comparative analysis (Hiver, 2015b), retrodictive qualitative modeling (Chan et al., 2015; Dörnyei, 2014), trajectory equifinality (Yashima & Arano, 2015) , variability analysis (Piniel & Csizér, 2015; Verspoor et al., 2008), and mixed methods for triangulation of data (Gregersen & MacIntyre, 2015; Nitta & Baba, 2015; Waninge et al., 2014; You & Chan, 2015).

Two articles of note have been published in the past eleven years in which the authors have attempted to encourage more uniformity and compatibility of theoretical tenets as well as methodological practices in taking a CDS approach to researching SLD by offering guiding principles and templates for methodological considerations (Hiver & Al-Hoorie, 2016; Larsen-Freeman & Cameron, 2008b).

Larsen-Freeman and Cameron (2008b) underscore the importance of investigating nested levels of context and timescales. To understand a system, different levels of granularity need to be considered. L2 motivation, for example, relates to contexts ranging from micro levels, such as, internal mental processes within the individual, as well as macro levels, including external social contexts such as class groups, a class as a whole, friends, clubs, the university, the city, the country, and the World Wide Web. The authors also suggest that just as multiple levels of nested contexts need to be taken into consideration, so too must different time scales be investigated:

> Because activity on one level and scale influences what happens on other levels and scales, with phenomena sometimes emerging at a particular level or scale as a result of activity at a lower level or in an earlier period, it is important when we are conducting research within a complex systems approach that we seek to find relationships within and across different levels and timescales. (p. 205)

Hiver and Al-Hoorie (2016), although writing eight years later, felt the need to repeat Larsen-Freeman and Cameron's call for researchers to carefully consider levels of granularity in their research, including considerations for macro-systems and micro-structures. Hiver and Al-Hoorie present a blueprint for including conceptual tools from CDST into empirical L2 research. Entitled *the Dynamic Ensemble* (see Table 2.1), it functions like a road map for researchers to consult when planning, designing, sampling participants, collecting data, and analyzing and interpreting results.

If concepts and terminology borrowed from CDST were applied uniformly in their application to SLD research, articles calling for more compatibility between theoretical tenets and methodologies would not be needed. It's regrettable that, in

some ways, the manner in which SLD researchers borrow concepts and terminology from CDST and apply it in their SLD research resembles an all-you-can-eat buffet in which different scholars rush off to different tables, heaping piles of food on their plate and calling it dinner when in actuality some have breakfast pancakes, others have lasagne, and yet others have rushed to the desert counter and are proudly touting their 'dinner', when as a matter of fact they have an ice cream sundae with a cherry on top.

Table 2.1 The Dynamic Ensemble (Hiver & Al-Hoorie, 2016)

Operational Considerations	Systems	What is the complex system under investigation?
		What gives this case phenomenological validity?
		Who are the agents in the system?
	Level of Granularity	On what timescale(s) will the system outcome(s) or behaviour(s) be examined?
		What type(s) and what level(s) of data are required to study the system?
Contextual Considerations	Context	What are the contextual factors that are part of the environmental frame of reference for the system, its dynamic actions, and its patterned outcomes?
		How are these contextual factors formalized into system parameters that influence behaviour?
		How does the system adapt to the context it is embedded in, and vice versa?
	System Networks	To which other systems (i.e., nodes) does this system link?
		What is the nature of these networked relationships?
		What processes ensue in coordination with other systems?
		When and how should these links be highlighted explicitly and investigated?
Macro-System Considerations	Dynamic Processes	What general principles of change exist for this system?
		What specific mechanisms of change are present in the system?
		What trajectory has the system followed, and how did it get to where it is?
		What causal signature dynamics (e.g. self-organization) produced the system outcomes, and why?
	Emergent Outcomes	What salient dynamic outcome configurations (i.e., attractor states) emerge for this system, and why?
		What are the characteristics of these patterns of stability for the system in the state landscape?
		What variability exists around these patterns of stability?
Micro-Structure Considerations	Components	What are the parts that make up the system under investigation?
		Which are the most prominent components of the system in a given process of change, or for an emergent outcome, and why?
	Interactions	

Parameters	What types of relationships exist between system components, and what are their characteristics? How do these exchanges manifest and affect system behaviour? How do these relationships change over time? What are the constraints and specifications that mediate the changes and interactions possible within a system, and how do they determine the system's behaviour? What are the critical dimensions or values of a system (e.g., the motors of change) which, when they fluctuate, may result in a change in outcome?

While leveraging a CDS approach to understanding L2 motivation is a relatively new endeavour, with Dörnyei, MacIntyre, and Henry's (2015b) anthology *Motivational dynamics in language learning* and Hiver and Al-Hoorie's (2019) *Research methods for complexity theory in applied linguistics* paving the way, it is understandable that some confusion and misconceptualizations of L2 motivation as a CDS are likely to occur as L2 scholars begin to familiarize themselves with the tools that a CDS approach affords. A careful constructive critique of some of the articles outlining CDST guided models and studies would be advantageous to understanding what errors have been made in the past and how scholars can avoid them in the future. The following section focuses on the former and will review how CDST has led to the reconceptualization of the L2MSS, as well as to the formulation of new models of language learner motivation.

Section 2.5.1 CDST Language Learning Motivation Models

The L2MSS has been reconceptualised using concepts and terminology borrowed from CDST. Henry (2015) has put forth a tentative model of possible self dynamics, in which he argues for the viewing of possible selves as shifting goalposts as changes in attractor state geometries. The same author (Henry, 2017) has proposed a *multilingual motivational self system* in which a CDS approach is used to

conceptualize the interaction of multilingual self guides as part of a CDS. These two models deserve further comment.

Henry (2015) is correct in his assessment that the over reliance of experimental and questionnaire-based methodologies has resulted in the incorrect tendency to view self-guides "as photographic stills rather than moving pictures" (p. 93). Adopting a CDST approach to understanding the L2MSS does have merit, especially in light of the fact that possible selves were originally viewed as being multifaceted and dynamic (Markus & Kunda, 1986; Markus & Nurius, 1986; Markus & Wurf, 1987). As the L2MSS has been a hugely impactful model for understanding L2 motivation, Henry's revision of the model is a welcome contribution to the field. There is no need to throw the entire L2MSS out if the error rests not in the model itself, but rather in the methodologies leveraged. Instead, with the flip of a switch on our camera from "picture mode" to "video mode", we are now able to view possible selves through the lens of CDST and capture moving pictures; such is the contribution of Henry's model of possible self-dynamics (see Figure 2.7).
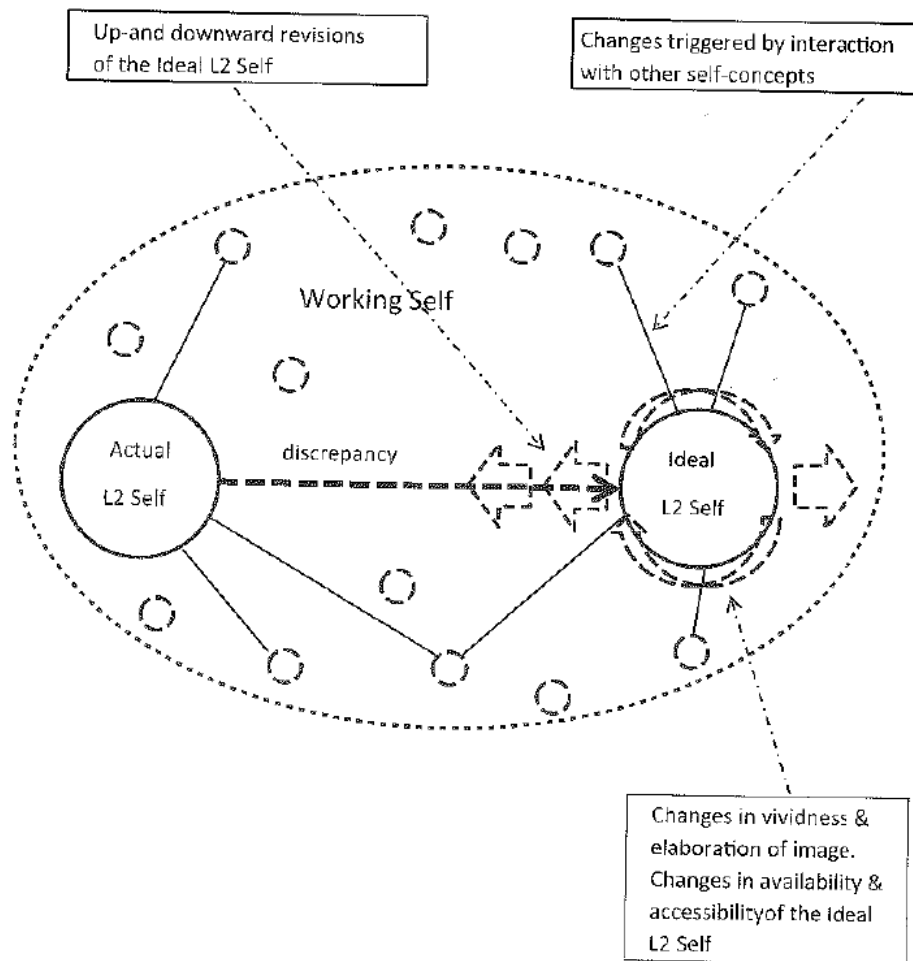
Figure 2.7 Henry's (2015) model of possible self dynamics, p. 92.

According to this model self guides, such as the Ideal L2 Self, are dynamically

changing as they interact with other self-concepts within the working self. The

working self-concept is comprised of the cognitively active self-conceptions that

make up the self-concept (Markus & Kunda, 1986; Markus & Wurf, 1987). The self-

concept is a multidimensional and multifaceted structure that houses generalizations

about the self that are produced from past experiences (including self guides)

(Markus & Nurius, 1986; Stein & Markus, 1996).

Henry provides a visual representation of four ways that the Ideal L2 Self changes within the working self. First, there are upward and downward revisions which relate to the perceived likelihood of achieving the L2 Ideal Self. As a learner gets closer to becoming their Ideal L2 Self, they may change the Ideal L2 Self to be something different, upgrading it and placing it further away from the actual self, thereby enabling the Ideal L2 Self to continue to be a source of motivation. On the other hand, learners who feel incapable of becoming the Ideal L2 Self may re-evaluate their situation and place the Ideal L2 Self to be closer to where the actual self is, thereby making it easier to achieve and a more likely source of motivation. Second, the Ideal L2 Self may change due to interactions with other self-concepts within the working self. Third, the vividness and elaboration of the image of the Ideal L2 Self may change. Lastly, the availability and accessibility of the Ideal L2 Self may change.

The application of CDST to this model of possible self dynamics actually resides in Henry's (2015) statement that "changes in the vision of the Ideal L2 Self and changes in the distance between it and the actual self, can be conceptualized as changes in attractor state *geometries*" (p. 87, emphasis in original). For Henry, if a learner downgrades their Ideal L2 Self, that is, moves the goal post closer to the actual self, then the attractor state may have become less deep and more narrow. The result of these changes, Henry suggests, is that the system will be more likely to move out of an attractor state as it becomes more unstable.

While Henry's model of possible self dynamics is a welcome contribution to the field, the model simply is not comprehensive enough, a fact acknowledged by the

author himself in his conclusion (p. 93). What remains are many unanswered questions. Most importantly, as Henry only describes changes in the Ideal L2 Self as changes in attractor state geometries, the question remains, what actually is the system? An attractor state *is* the state or potential state of a system at a particular time and it remains unclear if Henry is referring to L2 motivation, L2 language learning, self guides, or the working self-concept as a CDS. If the system is not clearly defined than any discussion of attractor state geometries of that system is rendered less meaningful. Furthermore, Henry refers to ideal and ought to L2 selves as attractor states, by doing so readers might get the impression that possible selves are CDSs. This is problematic because if learners can downgrade or upgrade their possible selves this implies that the learner has control over the system, which runs contrary to CDST, specifically that such systems are self-organizing.

There could be several reasons behind this confusion. First, perhaps Henry has confused attractor states with variables, something that others have warned against (Byrne, 2002, 2009; Byrne & Callaghan, 2014; Hiver, 2015a). Hiver (2015a), for example, states clearly that "attractor states allow us to classify or categorise the kind of thing a dynamic system is, but they must not be confused with variables as we normally use the term" (p. 25). Since Dörnyei first wrote about the L2MSS (2005, 2009a), L2 self guides have been considered powerful variables affecting L2 motivation, so it is possible that Henry has labelled ideal and ought-to L2 selves as both attractor states and variables. Second, perhaps Henry is referring to multiple systems, nested within each other, but has failed to explicitly delineate the differences between them. Third, the language used to describe attractor states is itself problematic. Largely due to the language utilized to describe attractor states, it

is tempting to think that attractor states are physical variables that influence the trajectory of the system.

As mentioned earlier, the term *attractor state* is misleading as it may for some readers conjure up the image of a magnet exerting a force external to the system. Attractor states are described as having a *shape*, a *depth*, a *width,* and *strength*; all of these terms again conjure up an image of something physical influencing the system from a distance. Consider how attractor states are described in the following quotations (emphasis mine):

> When a system is lodged in a part of the state space *governed* by a fixed-point attractor, cognitive, affective, and behavioural coherence pertains. (Henry, 2015, p. 84)
>
> Attractors may vary in *strength*, so that certain attractors are more likely that others to *capture* and *maintain* the dynamics of a person's functioning". Nowak et al., 2005, p. 356, cited in Henry, 2015, p 87)
>
> When elements of different systems converge, or when the state space of a system contains *competing* attractors, the path the system takes will be a function of the *strength* of the attractor state in which it is currently lodged and the capacity of the *competing* attractor state to *capture* and *maintain* the dynamics of cognitive, emotional and social functioning. (Henry, 2015, p. 90)

By using action verbs such as *governing*, *capturing*, *maintaining,* or *competing* when describing attractor states, scholars run the risk of misleading readers into thinking that attractor states are separate entities to the system and exert a force on the system. Consider how problematic it would be to say "an attractor state can capture the system". An attractor state *is* the state or potential state of a system and therefore it cannot capture the system. While using geometry to conceptualize why a particular system has a specific trajectory may be a useful aid, it is a *metaphorical* one. Utilizing CDS terminology to describe dynamic changes in SLD is problematic

enough that MacIntyre, Dörnyei & Henry (2015) cite it in their concluding chapter of

their edited anthology as one of the main difficulties in adopting a complex, dynamic

approach to L2 motivation research:

> Can [attractor states] be described as magnets that attract the system's behavior? If so, can attractors be equated with 'variables'? The simple answer would be no, because these questions suggest straightforward linear causation (as if attractors cause specific system behavior). In a discussion of this topic during the editing process, Kees de Bot (personal communication) categorically stated that 'Attractors do not attract, they simply are. Attractors are not magnets'. David Byrne (personal communication) went even further when he concluded, 'An attractor is very different form a variable. The term "attractor" is simply used to describe a possible state of a system. As such we can think of it as a domain in the possible (state) space'… in CDS terminology, attractor states are not necessarily pleasant; they just have to be stable over a specific time frame. Consequently, we have come to think of attractors exclusively as system outcome states (p. 422).

Henry (2017) seems to refine his approach to leveraging CDS concepts and

terminology when proposing a Multilingual Motivational Self System (MMSS). This

time the author explicitly states that the self is an emergent, higher-level system that

results from continuous interactions of subsystems; the MMSS is categorized as a

subsystem nested within the Multilingual Identity System, which is nested in the

Multilingual System (see Figure 2.8).
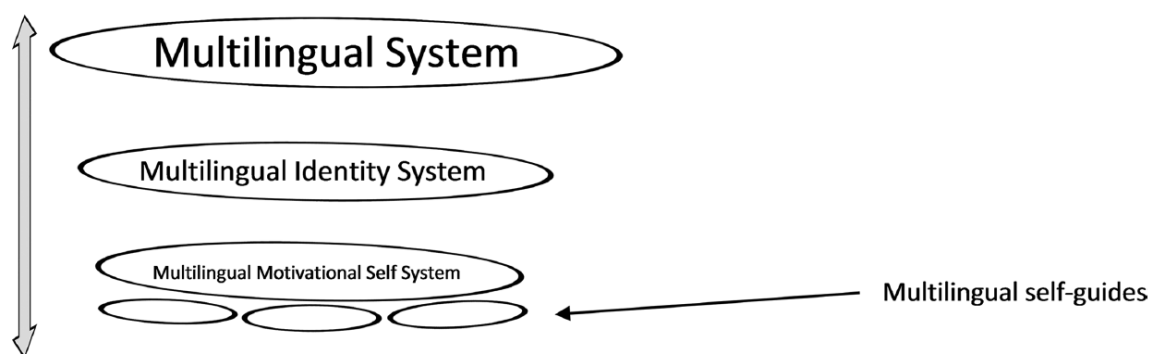
Figure 2.8 The Multilingual Motivational Self System (Henry, 2017, p. 553)

According to the MMSS, multilingual speakers can have ideal selves associated with different languages: ideal Lx, ideal Ly, and possibly ideal Lz selves. From the interaction of these ideal L selves emerge the *contentedly bilingual self* and the *ideal multilingual self*, both of which are considered components of the MMSS (see Figure 2.9). If someone is contentedly bilingual, then it stands to reason that this self-guide will have a negative impact on the learner's motivation to acquire additional languages. The ideal multilingual self is viewed to have a positive effect on a learner's motivation to learn additional languages.
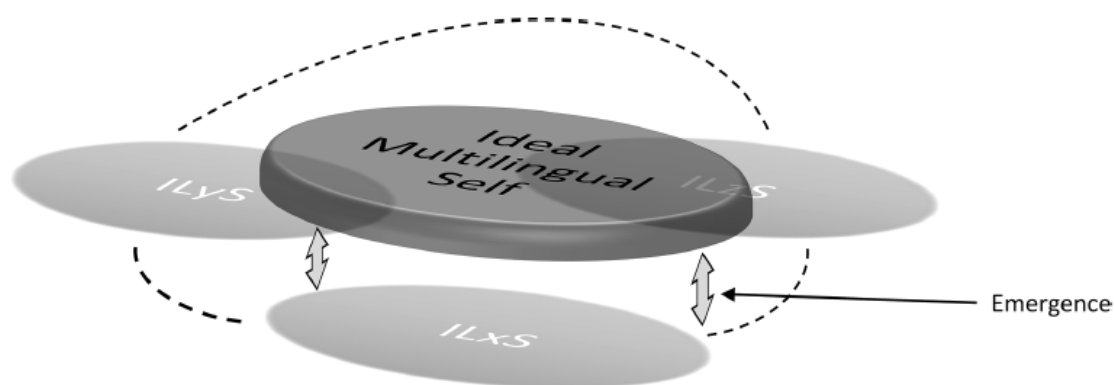
Figure 2.9 The emergent ideal multilingual self (Henry, 2017, p.555)

The difference in clarity between Henry's (2015) chapter on possible self dynamics and his article (2017) on the MMSS in large part is because in his discussion of the MMSS Henry explicitly defines what the system under consideration is and how that system interacts with other systems in the system ecology. He is also much more careful in his utilization of CDS terminology relating to metaphorical geometric descriptions of the trajectory of a system.

Not explicitly defining the system under investigation, not explaining interconnections of nested systems, and not utilizing CDS terminology appropriately are common problems that are found in some discussions and studies regarding the

motivational dynamics of language learning. This is understandable given that research in the field has been strongly influenced by positivism and constructivism. In order to lay the groundwork for the methodology of the current study, the following section will review and critique empirical studies related to CDST and motivational dynamics.

Section 2.5.2 CDST Guided Empirical Studies

Many recent L2 motivation studies aim to clarify what exactly attractor states are, that is to say these studies investigate how periods of stability in L2 motivation system can be identified and labelled. Waninge (2015), for example, conducted a study to investigate what the salient attractor states that make up the language learning experience are and what the main forces forming the attractor basin of such attractor states are. For phase one of her research, the author leveraged semi-structured interviews regarding learning experiences of students in classroom settings in the past. Participants included 56 second year students of English at a British university. In phase two the author conducted semi-structured interviews with 45 students that probed how learners' interest emerged and developed over time. All references from interview transcripts that related to states were categorized, with four distinct states emerging from the data: interest, boredom, neutral attention, and anxiety. When probing student interest, the author found that cognition, affect, and motivation, or a combination of the three were consistently mentioned as influences on the participants' development of interest. The author concludes that interest, boredom, neutral attention, and anxiety are four attractor states of the students' learning experience and that "the underlying attractor basin, causing the occurrence

of a certain attractor state, is a combination of cognitive, motivational, affective and contextual elements" (p. 211).

The study, beneficial though it may be, is problematic in several ways. First, the research design had second year university students recalling attitudes and emotions towards classroom learning experiences in secondary and tertiary education. This means that potentially several years had passed from when the experiences occurred and when the students reflected on them, thus it is difficult to ascertain to what degree students' recounting of their experience accurately reflect the reality of those classroom learning experiences.

Second, similar to Henry (2015), Waninge never explicitly makes the claim that what is being studied (in this case classroom learning experience) is a system. She notes that the L2 learning experience is an "aspect of the L2 self system" (p. 195) and claims that interest, boredom, neutral attention, and anxiety are four attractor states of the students' learning experience. As attractor states *are* states or potential states of systems, the reader is left to infer that Waninge is arguing that classroom learning experience is a system. But can a learning experience be in a state of interest, boredom, neutral attention, and anxiety? It makes more logical sense to view the motivational disposition, instead of learning experience, as a system, in which a student's motivational disposition enters periods of interest, boredom, neutral attention, and anxiety.

Third, if the author did intend to argue that classroom learning experience is a system, the author fails to propose how this system interacts with systems within and

outside of it. Fourth, the four attractor states (interest, boredom, neutral attention, and anxiety) might actually be various attractor states instead of being one single attractor state. The category of interest, for example, includes references towards states of being interested, engaged, curious, active and in a state of enjoyment. Instead of all these states being lumped into one attractor state of "interest", perhaps some of them may be considered as different attractor states, with parts of their attractor basins overlapping. The category boredom included states of zoning out, being distracted, being sleepy, and not paying attention. Again, the question can be raised if these should be considered as one attractor state or many. Perhaps interest is a quality of the motivational disposition to be engaged, curious, or enjoy the learning experience; boredom a quality of attractor states such as being distracted or being sleepy, or completely zoning out. In other words, the attractor states identified by the author (interest, boredom, neutral attention, and anxiety) might be qualities that make up the attractor basin that influences the way the system self-organizes into a specific attractor state.

Despite its blemishes, the study is of value. The author's findings that the classroom learning experience and the affective-cognitive-motivation conglomerate are "central to understanding a learner's overall motivational profile" (p. 197) has merit and these findings are echoed in other studies and can be found in the literature at large.

Piniel and Csizér (2015) explored changes in motivation, anxiety and self-efficacy of university freshman students majoring in English language and literature at a popular and prestigious university in Hungary (n=21). Leveraging a longitudinal mixed methods design, the researchers relied on a questionnaire to map students' general

disposition as well as states of motivation, anxiety, and self-efficacy over six points of time during an academic semester. Furthermore, grades of an academic writing test, and student essays on possible changes in dispositions towards learning the course were utilized. The authors conclude that motivation anxiety and self-efficacy of the students exhibited minor fluctuations over the course; that changes in motivation, anxiety, and self-efficacy were not uniform; that the motivational components most malleable were learning experience and the ought-to L2 self; and the ideal L2 self and motivated learning behaviour fluctuated the least. The importance of this study in relation to the present study, is that motivation, writing anxiety, and writing self-efficacy were viewed as components, or constituents of a subsystem. Unfortunately, the authors do not expound on how this subsystem interacts with other nested systems. Neither do the authors describe what the potential attractor states of the subsystem are.

Waninge, de Bot, and Dörnyei (2014) explored motivational dynamics of four language learners in a language class for two weeks. Their research questions include: (1) is there variability to be found in students' in-class motivation?; (2) is there a detectable stable level, or attractor state, in students' in-class motivation; and (3) if there is indeed variability and stability in students' motivation, can this be accounted for by the classroom context? (p. 708). Participants included four students in their first year of a Dutch secondary school, ages 11-12. The researchers employed three instruments: a novel 'Motometer', a classroom observation form, and a questionnaire gauging motivation/attitude. During each class section students indicated their motivation levels by drawing a line across the Motometer's thermometer-shape that ranged from 0 to 100. Students were prompted to record

their motivation levels and make an explanatory comment every five minutes when a non-disruptive soft bell sound was played. The observation form was used by a researcher to note contextual influences within the language classroom when the Motormeter measurements occurred. Findings revealed that (1) there are observable and considerable changes of L2 motivation within one single class session; (2) a rather stable motivation level could be found; (3) the trajectory of the motivational system's behaviour depended on the initial conditions of that system; (4) "the regulated and seemingly stable phases of the students' behaviour alternated with seemingly erratic reactions" (p. 719); and (5) contextual factors can account for some but not all of the variability in L2 motivation.

According to the authors, the system under investigation is language learners' motivation. Stable motivation levels (attractor states) could be observed, but these attractor states were not described or labelled other than describing one as a "highly motivated state" (p. 718). It is interesting to note that in regards to one highly motivated student, the study presents "evidence of a likely regulating influence, namely a student's overall liking of the subject matter" (p.718), which sounds quite similar to saying that the student's interest in a subject exerts a regulating influence on the motivational disposition, an idea previously discussed above in the review of Waninge's (2015) study.

Nitta and Baba (2015) explored the co-adaptation process (how two systems interact and respond to each other (Larsen-Freeman & Cameron, 2008a, 2008b) between two systems: the development of the ideal L2 self and task-specific motivation. While data was collected over one academic year from a total of 26 first year Japanese

university students in an EFL class, the study focuses on two students only. After completing writing tasks throughout the year, the students were asked to complete a reflection sheet in which they commented on their writing, comparing it to previous compositions, as well as comment on goals for future writing. Interviews were conducted at the end of the year in which students were asked about long-term future goals relating to their ideal selves and how they thought their writing had improved over time. The researchers concluded that students' self-regulatory processes were instrumental in the development of the ideal L2 self and L2 writing. The study is limited in scope, however, as it only takes two students under its magnifying lens.

The study stands out amongst empirical studies on L2 motivation because of two reasons. First, it raises the question as to how the self-regulatory processes fits into the micro-level motivational processes within the learner from a CDS perspective. Second, it focuses on the coadaptation of two systems, something that most other studies on L2 motivation that employ a CDS approach tend to ignore, as has been demonstrated in the current literature review.

Mercer's (2015) study explored four levels of the self that were conceptualized as nested systems: overall sense of self, current domain sense of self, momentary working self, and micro-level working self. These four levels of the self develop on different timescales and are influenced by different contexts (see Figure 2.10).
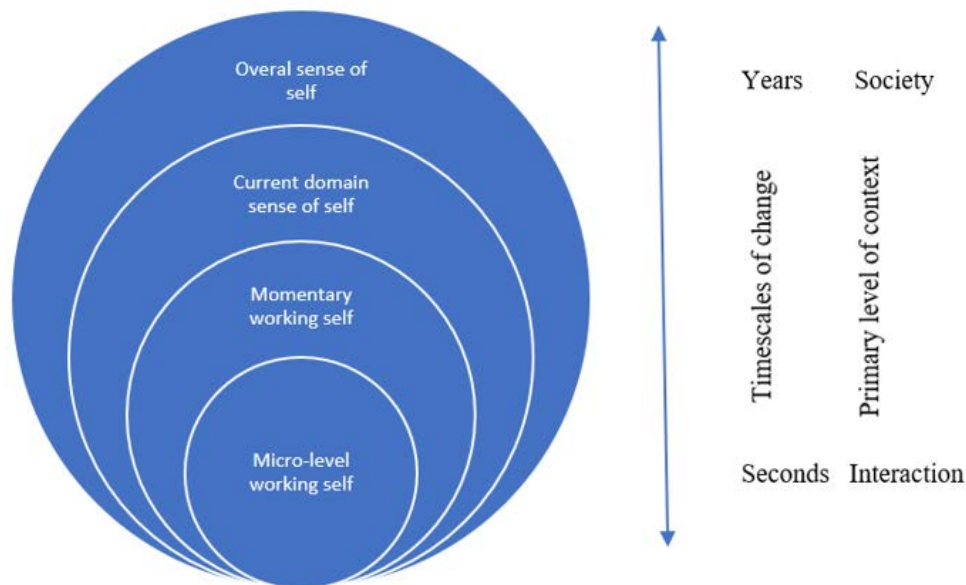
Figure 2.10 The self conceptualized as nested systems (Mercer, 2015)

Mercer utilizes idiodynamic tools, questionnaires, journals, interviews and multimodal narratives to investigate the development of the four levels of self, starting with the micro-level self on a timescale of seconds, to the overall sense of self on a timescale of months. Participants included three advanced EFL learners in an integrated English language skills course at an Austrian university, with two of them reported on in the study. Mercer found that the two participants' self dynamics varied greatly and suggests that the self system of each learner "has a different fundamental landscape" p.160). Perhaps this study's greatest contribution to the CDST L2 motivation literature is the research design, in which multiple nested systems are observed across varying timescales by means of varying instruments that best fit the varying timescales.

You and Chan (2015) explored the dynamics of L2 imagery in future motivational self-guides by employing a mixed-method design that leveraged survey (n=208) and

in-depth interviews (n=20). Participants were first and second-year undergraduate engineering students enrolled in a compulsory English course as well as first and second-year high school students in China. Findings suggest strong and positive correlations between the learners' future self-guide images, their intended effort (motivation), and self-guide imagery. The researchers were able to identify "possible dynamic interactions between imagery and three other factors, namely, motivational intensity, language learning behavior and language proficiency" (p. 416), suggesting that imagery is more dynamic than previously conceived. Imagery seems to affect the process of L2 learning and the process of L2 learning seems to affect imagery, which lends credence to the adoption of a CDS approach to studying L2 motivation.

Chan, Dörnyei and Henry's (2015) study utilizes a retrodictive qualitative modelling (RQM) approach to studying L2 motivation by identifying learner archetypes and observing signature dynamics. Dörnyei (2014) explained RQM in this manner:

> The essence of the strategy is surprisingly simple: instead of the usual forward-pointing 'pre-diction' in scientific research, we reverse the order of things and pursue 'retro-diction': by tracing back the reasons why the system has ended up with a particular outcome option we produce a retrospective qualitative model of its evolution. It is this reversed qualitative modelling element that gave the strategy its name: 'RETRODICTIVE QUALITATIVE MODELLING' (p. 85).

RQM, as suggested by Dörnyei (2014) and as utilized in Chan, Dörnyei and Henry's (2015) study, relies on a template of three steps. First, the salient student types in the classroom need to be identified, which can be done by statistical procedures of cluster analysis (Byrne & Callaghan, 2014, p. 160), Q methodology (Irie & Ryan, 2015) and a qualitative method of utilizing teacher focus groups. These salient

student types are considered attractor states. Second, students are selected by using a critical case sampling, in which students are selected based on their fitting one of the salient student archetypes. Third, qualitative data analysis is conducted on transcribed interviews with the participants to identify the system's signature dynamics. Chan, Dörnyei and Henry utilize this three-step template, including teacher focus groups as the means to identify student archetypes. Participants, including teachers for the focus groups and students for the interviews, taught or studied at a secondary school in Hong Kong. Six English teachers participated in the focus groups and seven Chinese students took part in two semi-structured interviews.

Seven learner archetypes were identified in step one: (1) a highly competitive and motivated student, with some negative emotions; (2) an unmotivated student with lower-than-average English proficiency; (3) A happy-go-lucky student with low English proficiency; (4) A mediocre student with little L2 motivation; (5) A motivated yet distressed student with low English proficiency; (6) A 'perfect' English Learner; (7) An unmotivated student with poor English proficiency (p. 243-244). The researchers found that in the focus group teachers easily agreed upon the learner archetypes, reducing a class of 30+ students to a smaller number of categories. The authors argue that this confirms the existence of settled attractor states. Additionally, the researchers found that the specific students investigated did not always "neatly fit" (p. 255) the archetypes. The researchers noted that as attractor states are temporary states of a system, students may shift from one archetype to another. The authors point out a challenge to utilizing RQM as a methodology is that the students identified by teachers as fitting a particular archetype may not agree to

participate in the research. The study is, as far as I can tell, the first to use Dörnyei's (2014) proposed RQM for L2 motivation research.

The study greatly contributes to the literature of L2 motivation but there are several problematic issues with the novel RQM, at least in the three-step template utilized in this study. One thing RQM does well is highlight the importance of leveraging retrospection to understand emergent outcomes of a CDS, something that has been highlighted by Byrne (2002); Larsen-Freeman & Cameron (2008a, 2008b); and de Bot & Larsen-Freeman (2011). If a learner's motivational disposition emerges from the interaction of nested systems and these systems' constituents, being able to predict a learner's motivational disposition at a particular time would likely be impossible due to the nonlinearity, openness, and non-finality of the systems. It makes sense to start with the observable emergent outcome first and then retrospectively (retrodictively) evaluate what interactions within the system might have contributed to the emergent outcome.

What actually is the system under question in the study? It appears from statements from the authors that the system under investigation is the motivational system of prototypical leaners: "we gained insights into the 'signature dynamics' of the motivational system associated with each prototype" (Chan, Dörnyei & Henry, 2015, p. 238).

 A major problem with the approach the authors take is that they predict attractor states and emergent outcomes before they actually occur, something RQM is supposed to avoid doing! Categorizing students into archetype is predictive in nature,

and as the authors pointed out, students did not always "neatly fit" (p. 255) these predictions. Furthermore, the archetypes, as outlined in the study, sometimes describe characteristics of students instead of motivational dispositions of students. Take for example archetype number six, "a 'perfect' English learner". According to the teachers' description, "they are confident, highly motivated, emotionally stable, have a genuine interest in the subject and engage eagerly in autonomous learning" (p. 244). Can a student be confident, highly motivated, emotionally stable and *not* have a genuine interest in the subject? If so, which of the seven archetypes do they fit? Perhaps a better way of conceptualizing what is going on is to view students' motivational disposition as a system in which confidence, emotional stability, and interest in the subject are components of the system that interact in such a way as to influence the trajectory of the system towards an attractor state (a stable motivational disposition in which the learner is willing to act in a particular manner). Engaging in autonomous learning is the result of the emergent outcome, which in this case is the motivational disposition of the learner, which has entered into a period of stability where the student is willing to "keep a vocabulary log, write grammar notes, and keep a journal in English" (p. 244). Despite its flaws, Chan, Dörnyei and Henry's (2015) study greatly contributes to the literature on L2 motivation as it takes for a test run Dörnyei's novel RQM and highlights the importance of using retrospection in understanding system dynamics and emergent outcomes.

While the studies and models summarized above (see also Table 2.2) do not form an exhaustive list, they contribute greatly to the field's understanding of L2 motivation as a CDS, despite their problems. Contributions to the literature include a clearer picture of how L2 motivation can be conceived as a complex and dynamic

phenomenon emerging from the interplay of internal and external factors, as well as insights into research design and methodology that can be leveraged to investigate L2 motivation.

Despite these contributions, I take issue with the extant literature in several regards. First, many researchers fail to clearly and adequately define the system being studied. One reason for this may be the influence of positivist traditions and terminology that have long dominated the field of SLA. Another reason may be that motivation, multifaceted and complex in nature, is not one system alone, but rather a conglomerate of systems working at different nested levels and time frames. Third, some CDST terminology has been, perhaps, misapplied; the misconception of attractor states being separate entities to systems that exert influences on systems is one example. Lastly, I found it surprising that none of the empirical studies investigating L2 motivational dynamics from a CDST perspective referred to or even mentioned the extant literature on demotivation and remotivation. A large number of studies investigating demotivation and remotivation of language learners have been conducted in a variety of countries and contexts. Findings from these studies may prove insightful as to how dynamics of motivation fluctuate over time and for what reasons. Therefore, the following section will review the extant literature on demotivation.

Table 2.2 Summary of empirical studies on motivation that leverage CDST informed methodologies

Authors	Focus of Study	Research Instruments	Major Findings
Waninge (2015)	What are the salient attractor states that make up the language learning experience and what the main forces forming the attractor basin of such attractor states?	Semi-structured interviews	Four distinct states: interest, boredom, neutral attention, and anxiety.
			The underlying attractor basin is a combination of cognitive, motivational, affective and contextual elements.
Piniel and Csizér (2015)	Changes in motivation, anxiety and self-efficacy	Longitudinal mixed methods design: questionnaire administered six points of time during an academic semester.	Motivation anxiety and self-efficacy of the students exhibited minor fluctuations over the course.
			Changes in motivation, anxiety, and self-efficacy was not uniform.
		Grades of an academic writing test, and student essays.	Learning experience and the ought-to L2 self were most malleable.
			Ideal L2 self and motivated learning behavior fluctuated the least.
Waninge, de Bot, and Dörnyei (2014)	Is there variability to be found in students' in-class motivation?	Motometer, a classroom observation form, and a questionnaire gauging motivation/attitude	There are observable and considerable changes of L2 motivation within one single class session.
	Is there a detectable stable level, or attractor state, in students' in-class motivation?		Rather stable motivation levels could be found.
			The trajectory of the motivational system's behavior depended on the initial conditions of that system.
	Is there variability and stability in students' motivation and can this be accounted for by the classroom context?		Contextual factors can account for some but not all of the variability in L2 motivation.
Nitta and Baba (2015)	The development of the ideal L2 self and task-specific motivation	Writing tasks, reflection sheet, interviews	Students' self-regulatory processes were instrumental in the development of the ideal L2 self and L2 writing.

Table 2.3 Summary of empirical studies on motivation that leverage CDST informed methodologies (continued)

Authors	Focus of Study	Research Instruments	Major Findings
Mercer (2015)	Four levels of the self that were conceptualized as nested systems: overall sense of self, current domain sense of self, momentary working self, and micro-level working self.	Idiodynamic tools, questionnaires, journals, interviews and multimodal narratives	Participants' self dynamics varied greatly, suggesting that the self system of each learner has a different fundamental landscape.
You and Chan (2015)	Dynamics of L2 imagery in future motivational self-guides	Questionnaire and in-depth interviews	Possible dynamic interactions between imagery and motivational intensity, language learning behavior and language proficiency, suggesting that imagery is more dynamic than previously conceived.
Chan, Dörnyei and Henry (2015)	Identify learner archetypes and signature dynamics by means of retrodictive qualitative modelling	Focus groups, interviews	Teachers easily agreed upon seven learner archetypes. Specific students investigated did not always neatly fit the archetypes.

Section 2.6 Demotivation

Section 2.6.1 Defining Demotivation, Amotivation, and Demotivators

Demotivation, which has sometimes been referred to as the "dark side of motivation" (Dörnyei & Ushioda, 2011, p. 138; Sakui & Cowie, 2012, p. 205), refers to negative influences that reduce existing motivation. It is important to note that this loss of motivation is viewed differently in the current literature than a complete absence of motivation, which has been referred to by some as amotivation. Noels et al. (2000), for example, use the term amotivation to describe when "…people have no reason, intrinsic or extrinsic, for performing the activity, and they would be expected to quit the activity as soon as possible" (p. 40). Deci and Ryan (1985, as cited in Dörnyei & Ushioda, 2011), view amotivation as "the relative absence of motivation that is not caused by a lack of initial interest but rather by the individual's experiencing feelings of incompetence and helplessness when faced with the activity" (p. 140). Sakui and Cowie (2012) place demotivation and amotivation under the umbrella term of unmotivation. While the above definitions demonstrate how there is some degree of variety in how the terms demotivation, amotivation, and demotivators are used, it is generally agreed that amotivation refers to a lack of motivation, that demotivation is the negative influence on existing motivation by factors called demotivators, and that "if motivation pushes learning for life, demotivation cuts learning short" (Falout & Falout, 2005, p. 280).

This thesis adopts a definition and conceptualization of demotivation similar to that employed by Kikuchi (2011, 2015). Kikuchi is right to differentiate the terms demotivation, demotivators, demotivating, and demotivated (see Figure 2.11). According to Kikuchi, a learner's motivation can move towards states of motivation,

demotivation, and amotivation based on motivating or demotivating influences from motivators and demotivators. Demotivation, as used in this thesis, refers to the negative effect that internal and external factors have on a learner's motivational state. In other words, demotivation leads to a reduction in the learner's willingness to act, study, or learn. This negative demotivating force that makes individuals feel demotivated stems from demotivators, or "specific internal and external forces that reduce or diminish the motivational basis of a behavioral intention or an ongoing action" (Kikuchi, 2015, p. 4). It is important to note that "demotivation does not necessarily mean a lack of motivation; demotivation also occurs, for instance, when the motivation of a highly motivated student decreases to an average level" (Kikuchi, 2015, pp. 3-4). Having defined demotivation and related concepts, the next section will review existing literature on language learner demotivation.
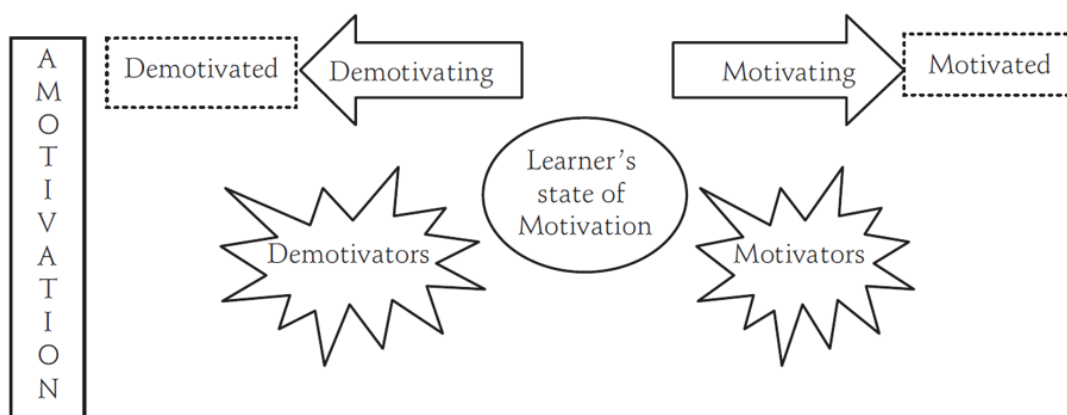
Figure 2.11 Kikuchi's (2015, p. 4) model of a learner's state of motivation as it moves towards motivated or demotivated states based on influences of motivators and demotivators

Section 2.6.2 Literature on Demotivation

While the amount of extant literature on demotivation pales in comparison to the vast amount of studies conducted on motivation, the past two decades have seen a growing number of empirical studies on the topic. Research on demotivation has

been conducted in a variety of contexts and learning environments, including

America and Europe (Chambers, 1993; Christophel & Gorham, 1995; Dörnyei, 2001;

Gorham & Christophel, 1992; Oxford, 1998), Vietnam (Trang & Baldauf, 2007;

Tuan, 2011), Iran (Alavinia & Sehat, 2012; Moiinvaziri & Razmjoo, 2013); Pakistan

(Krishnan & Pathan, 2013); Saudi Arabia (Daif-Allah & Alsamani, 2014); Japan

(Falout & Maruyama, 2004; Kikuchi, 2009, 2015; Kikuchi & Sakai, 2009; Sakai &

Kikuchi, 2009), Korea (Kim, 2011; Song & Kim, 2017), and China (Hu & Cai, 2010;

C. Li, 2014; Li & Ruan, 2013; Li & Zhou, 2017; L. Li, 2013; Q. Li, 2014; Liang,

2008; Sun & Lei, 2013; Zhou & Wang, 2012). The following sections will review

some of the key studies on demotivation. It is important to note, and it will be

discussed in further detail later, that while these studies are useful in shedding light

on demotivation and demotivators, they often fail to take into consideration the wider

social and environmental context, rather opting to focus on learner's perceptions of

their experiences only in class.

Section 2.6.2.1 Teachers as a Source of Demotivation: Early Insights from Studies in America and Europe

Many early studies on demotivation in America and Europe found that students

frequently attribute demotivation to their teachers. Conducting one of the earliest

studies on learner demotivation, Gorham and Christophel (1992) explored motivators

and demotivators of 308 undergraduate students enrolled in introductory

communication courses in an American university. They found that students

perceived motivation as a student-owned state, while demotivation was attributed to

teacher behaviour. In the study, 2404 motivators and demotivators were coded and

categorized. Approximately 44% of both motivators and demotivators related to

teacher behaviors, with negative teacher behavior being perceived as pivotal in students' demotivation. The top five categories of demotivators included teachers being boring or unorganized, dissatisfaction with the grading of assignments, poor organization of material, teachers being unapproachable or self-centered, and the subject being viewed as boring, difficult, or irrelevant.

These findings, that American students viewed motivation to be a student-owned state and demotivation to be largely a result of teacher behavior, were echoed in a second study conducted by Christophel and Gorham (1995). In this study a total of 319 students at two American universities identified sources of motivation and demotivation in college classes. The study's findings suggest that student state motivation is modifiable, and that the strongest influence on learner motivation was, surprisingly, not the presence of motivators in the classroom, but rather the absence of demotivators, with the most positive influence on learner motivation being the absence of teacher behaviors that were viewed as demotivating.

Oxford (1998) investigated teacher and course characteristics associated with demotivation in the language classroom by conducting content analysis of essays written by 250 American high school and university students on the topic of conflicts with teachers and uncomfortable experiences in the language classroom. Four broad themes emerged from the data: teachers' personal relationship with the students, teachers' attitudes towards the course or material, style conflicts between teachers and students, and the nature of classroom activities. Oxford (2001) further explored teacher behavior as a potential source of demotivation by conducting a content analysis of essays relating to positive and negative experiences with language

teachers, written by 473 students from Mexico, Germany, Iceland, Finland, Egypt, Bangladesh, India, Pakistan, Chile, Korea, Japan, China, and the USA. She identified three major teaching approaches: autocratic, democratic/participatory, and laissez-faire approaches. Oxford argued that both too much and too little control by the teacher was perceived as being demotivating by students, and that major negative influences on student motivation were teacher behaviours and attitudes relating to autocratic and laissez-fair approaches.

In Dublin, Ushioda (1996, 2001), conducted a qualitative investigation of 20 Irish learners of French at Trinity College. These learners were asked to identify what was demotivating in their L2-related learning experience. Demotivators reported related to negative aspects of the learning context, such as learning tasks and teaching methods, both of which are linked to teachers and their decision making power in the language classroom.

Chambers' (1993) study was different than the summarized studies above in that it took into consideration both teacher and student perspectives towards demotivation. While the studies highlighted above suggest that students typically blamed teacher behavior as the primary source of demotivation, Chambers found in his investigation of seven teachers and 191 year-nine students that teachers did not view demotivation stemming from their own behavior, but rather identified psychological, attitudinal, social, historical, and geographical reasons for student demotivation. Chambers also found that in some cases demotivation resulted from the home, rather than in the classroom, and that demotivated learners appeared to have lower self-esteem than their peers.

Dörnyei's (1998) study differed in its methodology in that he held one to one interviews with 50 pupils enrolled in various secondary schools in Budapest studying either English or German as a foreign language who were specifically identified by teachers or fellow peers as being demotivated. The top nine categories of demotivators included the teacher, inadequate school facilities, reduced self-confidence, negative attitude towards the L2, compulsory nature of L2 study, interference of another foreign language being studied, negative attitude towards L2 community, attitude of group members, and the coursebook utilized. Of particular note is that 40 percent of the total comments made by students relate to the teacher.

These early studies conducted in America and Europe during the 1990's suggest that learner demotivation, at least in the minds of learners, largely stems from decisions directly related to the teacher, and that self-esteem seems to play some kind of a role in the process by which students may become demotivated. Furthermore, these studies primarily focused on the learning context of the classroom, and excluded potential factors of demotivation internal to the language learner and factors outside the learning context of the classroom. It was not until the 2000's when researchers in Japan started to investigate factors internal to the language learner in addition to factors relating to the learning experience in the classroom.

Section 2.6.2.2 Demotivation and Internal processes: Studies in Japan

Many studies in Japan since the 2000's echoed the findings that teacher behavior may frequently be viewed as a source of demotivation.They have also explored the internal processes of language learners and their relation to demotivation. In his book

Teaching and researching motivation, Dörnyei (2001) defined demotivation as "specific external forces that reduce or diminish the motivational basis of a behavioral intention or an on going action" (p. 143). Dörnyei further argued that demotivation does not result from powerful distractors or a more attractive option, gradual loss of interest, and internal process of deliberation without any specific external trigger. Falout and Maruyama (2004) argued that this definition contradicts the findings of Dörnyei's (1998) study in which reduced self-confidence and negative attitude towards L2 community were two identified demotivaing factors. I would point out, however, that Dörnyei argues that demotivation does not result from internal processes without any specific external trigger. If reduced self-confidence and negative attitudes towards the L2 community are triggered by external factors, then Dörnyei's definition does not contradict his findings in 1998.

Regardless, Falout and Maruyama's (2004) study provided additional insights into demotivation experienced by language learners. Falout and Maruyama, using a 49-item Likert scale questionnaire to explore six factors based on Dörnyei's original nine. These included teachers, courses, attitude toward L2 community, atittude toward L2 self, self-confidence, and attitude of group members. Participants included 162 Japanese freshmen from two consecutive years who were attending a private science college near Tokyo. The study's major contribution is the understanding that students of different proficiency levels may attribute sources of demotivation differently. Students were divided into two groups: lower and higher proficiencies. While the same percentages of lower proficiency and higher proficiency students experienced demotivation, lower proficiency students tended to internalize the causes of their demotivation. Higher proficiency students, on the other hand, displayed more

control over their affective states and learning situations. The authors noted a statistically significant correlation between lower proficiency students' past demotivation and their present dislike of English. Furthermore, the authors found that teachers were the most interrelated and influential factor, and that higher proficiency students were more likely to experience demotivation due to teacher behavior than lower proficiency students.

Falout and Falout (2005) would later point out that while higher proficiency students maintained the same level of self-confidence as when they started learning English, lower proficiency students experienced a reduction of self-confidence over time, and that the longevity of demotivation is likely due to the correlation between negative affect and demotivation from the past. In other words, lower proficiency students tended to blame themselves, and the more they blamed themselves the worse they would perform. The worse they performed, the more likely they were to continue blaming themselves. The authors conclude that students who experienced demotivation to study English early in their learning were not as capable in controlling their affective states and that low self-confidence is a major demotivator.

Falout, Elwood, and Hood (2009) and Carpenter et al. (2009) continued to investigate the relationship between demotivation, affective states, and learning outcomes by further exploring what they call the antecedent conditions of the learner. Falout, Elwood and Hood (2009) surveyed 900 university EFL learners regarding their previous demotivating experiences and present language proficiencies. They found that internal demotivational factors predicted language proficiency better than external conditions of the learning environment and that less-proficient learners in

non-English majors were the students least able to control their affective states when encountering demotivating experiences. Carpenter et al. (2009) had 285 Japanese EFL students reflect on demotivating and remotivating factors, chart their motivation to study English throughout their education, and complete a questionnaire, providing reasons for any possible demotivation experienced while studying English. Results suggest that the top demotivators were the difficulty of classes, dissatisfaction with the teacher's teaching methodology (i.e. overreliance on the grammar translation method and/or rote learning), dissatisfaction with the teacher in general, boredom with lessons, the focus on exams for entering high school and university, negative feelings regarding students' ability to learn, and the lack of relevance or lack of interest in the topic.

The authors also point out that those students who had positive antecedent conditions of the learner, or positive affective and attitudinal conditions towards learning English at the start of the study, experienced fewer periods of demotivation in the past and were more able to leverage strategies to remotivate themselves when they did experience demotivating setbacks. These findings suggest that an ecological approach to understanding motivation (and demotivation), in which learner motivation is understood to be situation-specific and dynamic, is more appropriate than approaches that adopt a more traditional view in which learner motivation is a static individual difference that is "externally regulated and beyond the control and agency of learners themselves" (Ushioda, 2007, pp. 23-24).

Sakai and Kikuchi (2009) reviewed studies of demotivators in the EFL classroom and argued that demotivators experienced by language learners could be organized

into six basic categories: teachers (attitudes, competence, proficiency, personality, and teaching style); characteristics of classes (content, pace, focus on grammar, vocabulary, rote memorization, and exams); experiences of failure and associated feelings of disappointment and incompetence; class environment (classmates, friends, class dynamics, inadequate use of school facilities); class materials (unsuitable or uninteresting); and learner interests (English viewed as unnecessary or low regard for English speaking people) (p. 61).

Other studies from Japan (Arai, 2004; Hasegawa, 2004; Kikuchi, 2009) continue to reinforce the point that EFL learners in Japan tend to experience demotivation in learning English because of external factors such as the compulsory nature of the English classes, teachers' behavior, the grammar translation method utilized, the focus on tests and university entrance exams, the focus on rote-memorization and over reliance on textbooks considered boring, as well as internal affective factors such as feelings of boredom, incompetence, failure, and low self-esteem.

The summarized studies above demonstrate that demotivation studies from Japan in the 2000's echoed the earliest studies on learner demotivation that teachers are frequently cited as major sources of demotivation. They also highlighted the importance of investigating internal affective processes in addition to the external factors found in the language classroom.

Section 2.6.2.3 Demotivation Studies in Korea and China

Studies on demotivation in Korea have produced similar results to the studies conducted in Japan. Song and Kim (2017), for example, investigated sources of

demotivation of Korean high school EFL students. Analyzing data from motivational change graphs, where students retroactively reflected and charted their motivation to study English from kindergarten to high school, an open-ended questionnaire and follow-up interviews, these scholars argue that the majority of students became most demotivated during junior high school and that the factors of demotivation were mainly external, including ineffective teaching methods, learning difficulty, and social pressure.

Similar to studies conducted in Japan and Korea, most studies of English language learners and demotivation in China are conducted in EFL contexts, with the identified demotivators being much akin to those identified in Japanese and Korean EFL contexts. Hu and Cai (2010), for example, identified six demotivators experienced by non-English majors: learning interest, learning goal, valence, anxiety, attribution, and learning environment. Zhou and Wang (2012) explored demotivation amongst 766 college English learners and found five major categories of demotivators: lack of intrinsic interest, lack of effective learning strategy, teachers' competence and teaching style, curriculum and learning material, defective teaching attachments. Q. Li (2013) investigated demotivation reported by Chinese college EFL learners and found the following demotivators: a decrease in self-confidence, insufficiency in affective cognition, lack of learning effective learning strategies, and lack of intrinsic interest. Sun and Lei (2013) found four salient demotivators experienced by EFL students: teaching contents, student-related factors, teaching-related factors, and the teaching environment, with teacher-related factors as the most influential. Lastly, Li and Zhou (2017) researched demotivators experienced by EFL students in non-key Chinese universities and found eight main sources of

demotivation. External factors, such as teaching materials, the teaching process and class content, significant others, teachers' competence and attitude, student-teacher relationships, and the classroom facilities were found to be more influential than internal factors such as lack of intrinsic interest, experiencing failure, lack of self-confidence, and having no clear study goals.

A major problem, however, with many demotivation studies conducted in China is the over-reliance of questionnaires (Q. Li, 2014). This is true for most studies on demotivation conducted outside of China as well. Furthermore, although these studies shed light on demotivation in the Chinese context, their relevance to the current study might be questionable, given that the current study is situated in a different context, the context of a TNE EMI university. The next section will review studies in the EMI context that relate to demotivation and motivation.

Section 2.7 Studies in the EMI context

Unfortunately, while there has been a growing number of empirical studies investigating language learning in EMI universities, studies on motivation, and especially demotivation, are rare. Despite this, general research conducted in EMI contexts may provide insights into possible demotivators experienced by ELLs in these contexts.

Macaro et al. (2018) conducted a systemic review of 83 studies related to EMI instruction in HE throughout the world. They concluded that evidence is insufficient to argue that EMI benefits language learning, and that it is also not clear from the extant literature whether or not EMI is detrimental to students' learning of academic

content. Positive motivations reported by students to enroll in EMI programs included the perceived instrumental advantages of improving English and gaining access to opportunities to study abroad. Negative motivations are cited as levels of English proficiency that may be too low for students to benefit from EMI, thereby having a negative impact on students' ability to learn academic content. It is important to note, however, that these learner beliefs are towards EMI in general, and not specific to their motivation to learn EAP. The authors call for more studies which document transition from secondary to higher education, a call that this study answers.

It may be that in the TNE EMI environment students are likely to experience demotivation in studying EAP if their English level is subpar. As Hu (2019) notes, "In the absence of functioning proficiency in the instructional language, students are also unlikely to engage in conceptual development, deep comprehension, critical thinking, and knowledge construction. Both their subject and language learning will suffer as a result" (p. 8). On the other hand, a deficiency in language proficiency may be motivating in nature, providing a rationale for students to study EAP more intensely than before, as seen in studies such as the one conducted by Du and Jackson (2018).

Another potential demotivator for EMI students is the potential lack of ability of some EMI teachers to deliver lectures and interact with students in English in a clear and engaging manner. Regarding EMI teaching in China, Hu (2019) observes: "most, if not all, EMI teachers are subject experts who have not been trained in language teaching and thus need to build up their repertoire of effective communicative

strategies for interacting productively with their students and giving them ample interactional feedback that can effectively support language development" (p. 8). If students find traditional teacher-centered teaching methodologies to be demotivating, it is doubtful they would be captivated by an academic utilizing a teacher-centered style of lecturing all the while struggling to convey in English how to solve differential equations. As Zhao and Dixon (2017) note, "changing the language of instruction from Chinese to English certainly is a big shift for the practitioners who have been teaching mainly in their native language to an audience of speakers of that same native language" (p. 6). It stands to reason that students may experience demotivation if they struggle to understand the content of their classes because the academics teaching the classes struggle with teaching in English. To what degree this may affect students' motivation to learn academic English remains to be seen.

Currently we can do little but make predictions as to what factors of demotivation students encounter in EMI contexts as they transition from EFL secondary educational contexts to tertiary classrooms. The problem is twofold: first, there are few studies investigating demotivation and motivational dynamics in the EMI context; second, EMI contexts, even within the same country, such as China, vary immensely. Such variation makes it difficult to apply findings from one EMI context to another. As EMI refers to the practice of teaching academic subjects in English, a university within China that offers one academic content course in English is considered as utilizing EMI. This is vastly different from the TNE-EMI-EFL context of XJTLU, the context of the current study, where all academic courses, language and content, are taught in English. It stands to reason that a study investigating the motivation of ELLs in a university that offers one EMI course could drastically differ

in its results than a similar study conducted in the TNE-EMI-EFL context. Indeed, the amount of English actually used in EMI classes within China varies greatly. Wu et al. (2010), for example, reported that about one-fifth EMI courses surveyed actually used English less than 30% of the time; only 13.6% used English more than 80% of the time.

Rose et al. (2020), investigated the question of 'what drives success in EMI courses?' by exploring the relationships between English language proficiency, motivation, academic language skills, and course performance. Participants were 146 Japanese university students enrolled in an EMI business program. The authors found that motivation did not correlate with higher grades. They conclude that these results might not be replicated at in other EMI contexts given that each EMI context is unique.

C. Li (2013b) conducted a longitudinal study of EAP learners' beliefs, motivation and strategies from a socio-cultural perspective. Using a questionnaire with 1026 students and semi-structured interviews with 16 students, Li explored how the motivation of these students to learn English changed after studying EAP for one year at an EMI University. The motivation constructs investigated included *Intrinsic Interest*, *Immediate Achievement*, *Going Abroad*, *Individual Development, Information Medium*, *Important Others,* and *Learning Situation*. Conducting an independent t-test of these motivation constructs, Li found that after studying EAP for a year there were statistically significant changes for *Going Abroad, Information Medium, Important Others,* and *Learning Situation,* with the largest increases occurring with *Information Medium* and *Learning Situation*. This suggested that

these learners had their interest in learning English strengthened by their interaction with their teachers and peers.

Issues in the reliability of the instrument used, however, limit the usefulness and generalizability of the study. The Cronbach Alpha coefficients for these motivation constructs are quite low in both pre/post surveys and many of the constructs are only measured with two items. *Information Medium*, for example, had alphas of .374 and .407, which are far below the recommended minimum threshold of .6 (Dörnyei & Taguchi, 2010). For the second survey 4 of the 7 measured constructs had alpha coefficients <6, suggesting that there are serious reliability issues with the items measuring these motivation constructs. Despite these issues in reliability, Li's (2013) thesis does highlight the need for understanding the motivational dynamics of EAP learners in the TNE EMI setting.

Jiang, Zhang, and May (2019) invested the implementation of EMI in China, including teachers' practices and perceptions, as well as students' learning motivation and needs. The research context of their study was a medical university that utilized EMI in its seven-year basic medicine degree programme. At the time of the study, the 200 second-year students that participated had already been enrolled in two semesters of EMI and English for Specific Purposes (ESP) courses. Data from a questionnaire assessing students' ESP learning motivation and needs revealed that the major motivations for studying ESP were to gain an adequate linguistic ability to read subject literature and find academic information, to be more likely to pass exams, earn credits, and/or get a degree and to improve academic writing skills for the purpose of publishing academic work. The authors argue that student motivation

to participate in ESP courses was related to the needs or demands to learn English, as imposed by EMI courses, as well as expectations that would be placed upon students in their future academic or medical careers.

While there are several studies that have explored motivational dynamics of ELLs who transition from EFL contexts to English-speaking countries (Hsieh, 2009; Irie & Ryan, 2015; Li, 2017), only a few studies have been conducted on motivational dynamics and the transition of ELLs from EFL to EMI contexts (Du & Jackson, 2018; Gao, 2008). Du and Jackson (2018) investigated changes in motivational dynamics of eight Mainland Chinese undergraduate students as they studied at a bilingual university in Hong Kong, with the majority of classes being EMI classes. The eight participants were surveyed and interviewed during the end of their second or third year. Few demotivating situations in the students first few years in Hong Kong were identified. It is my opinion that this may be due to retrospective nature of the study as students were asked to reflect on events that had occurred one or two years in the past. In regard to positive motivation, students experienced motivational surges due to specific situational factors such as a study tour abroad or an approaching English proficiency test. The researchers argue that long-lasting motivational upward swings were connected to students' perceptions of their ideal L2 selves, other L2 self-concepts, and their context. In regards to how to support students transitioning from EFL to EMI contexts, the authors suggest that learning support be offered in and out of class to help students, with the specific example of an ESP course helping students to understand how to participate in class discussions and chats in formal and informal settings.

Section 2.8 Studies on Demotivation Utilizing a CDST Framework

As far as I am aware, only a few articles have been published to date that examine demotivation from a dynamic systems perspective. Kikuchi (2017) conducted a longitudinal study of 20 Japanese university freshmen majoring in International Studies and Nursing. Using multiple avenues of research, including group interviews, reflective student journals, and motivational questionnaires, learners' motivational dynamics were explored over two semesters for a 10-month period. Five learner types were identified by quantitative data analysis and demotivating and motivating factors were found by analyzing the group interviews and student journals. Each learners' motivational system differed in trajectory and each learner experienced unique motivation and demotivation stemming from sources both inside and outside of the classroom. Demotivators identified by Kikuchi include taking a long summer holiday, part-time jobs, club activities, problems in personal relationships, and teachers' teaching styles. Kikuchi argues that "each learner interacts with contextual factors differently and it is simply not possible to identify what motivates or demotivates all the learners" (p. 142). Because of the complex nature of motivational dynamics of language learners as they encounter sources of demotivation and motivation, Kikuchi argues that it is important to continue studying and exploring what motivates and demotivates students in their lives and to understand the complex interplay of various agents such as classmates, teachers, and other contextual factors.

Kikuchi (2019), explored the motivation and demotivation experienced by four Japanese university students over the course of two years by using monthly interviews and a 29 item questionnaire. The questionnaire tracked changes in 8 motivation constructs (Motivated learning behavior, Ideal L2 Self, Ought-to L2 Self,

Attitudes to Learning English, Instrumentality-Promotion, Instrumentality-Prevention, and Cultural Interest). Kikuchi found that the motivational constructs for each learner had different trajectories and that contextual factors outside of the L2 learning experience, such as part-time work and university clubs and activities played significant roles in shaping the students' L2 motivation. The author concludes that while motivation is frequently regarded as an individual attribute, it is important to acknowledge that it is constrained by the learners' social environment.

Section 2.9 Rationale for this Study

Having reviewed the relevant literature on motivation, CDST, and demotivation, this section will now outline the rationale for the current study, which is two-fold. First, the exigency for this study is rooted in the author's experience of teaching demotivated EAP learners at XJTLU, a TNE EMI university. The original questions that prompted the study were: *How can students' motivation to attend and participate in EAP courses drop so low, considering the importance that academic English skills and vocabulary likely have for students' success in their studies at a TNE EMI university*? W*hat if anything can be done to improve the situation for students and teachers?*

Second, the study attempts to fill several gaps in the extant literature. In regard to the literature on demotivation, the majority of studies on demotivation and ELLs are cross-sectional and leverage only questionnaires. These studies paint an incomplete picture of motivational dynamics of language learners as the studies fail to investigate factors of demotivation and motivation outside the classroom and across time. A critical examination, a sort of land surveying of the motivational landscape

of the broader sociocultural context, would be beneficial in understanding what factors are affecting students' motivation. This is particularly needed in the context of first-year university language learners (Busse & Walter, 2013); and especially so in the context where students are transitioning from secondary EFL contexts to tertiary TNE-EMI contexts (Du & Jackson, 2018). These authors' calls for further research relate to my own challenge of teaching demotivated EAP learners, and there is, therefore, a very practical need to understand demotivating and motivating factors experienced by EAP learners in the TNE-EMI context.

The rationale for the current study is also bolstered by the need to further understand how a CDST approach can be leveraged to better understand motivational dynamics of language learning. Waninge (2015), for example, has called for further research investigating how motivation, cognition, affect and context interact together to shape attractor states or organized patterns in the learning experience. The current study answers this call to explore possible relations between sociocultural and educational contexts outside of the learner, as well as internal elements such as motivation, cognition, and affect, which give rise to an emergent motivational disposition of the learner.

In the conclusion of their anthology on motivational dynamics in language learning, MacIntyre, Dörnyei, and Henry (2015) wrote: "we hope that future studies will build upon the lessons described in [this book] in further developing both CDS conceptualisations of motivational processes and the methods to address them" (pp. 427-428). The current study answers this call and advances its own CDS conceptualization of language learners' motivational processes. In addition, it

proffers research instruments tailored specifically for the TNE-EMI context. The research objectives and questions will be outlined in the following section.

Section 2.10 Research Objectives and Questions

This study has the following research objectives: (1), to investigate the dynamics of motivation of EAP learners at a TNE EMI university; (2) to identify the salient motivating and demotivating factors influencing these dynamics in motivation, (3) to explore the feasibility of using CDST in studying motivation, and (4), to design and utilize new methodological instruments, thereby contributing to the current and ongoing efforts to understand how best to research the complex and dynamic nature of language learner motivation.

In order to achieve these objectives and to guide the research methodology, the study focuses on the following research questions:

1. How does the motivation of EAP learners at a TNE EMI university change over the course of a semester in their first year?
2. What are the salient motivating factors for these students?
3. What are the salient demotivating factors for these students?

Section 2.11 Conclusion

This chapter will conclude by summarizing what is known regarding language learner motivation based on the existing literature. Over the past sixty years L2 motivation has evolved from being viewed as a static attribute and variable in learners' cognitive individual differences to being perceived as a multifaceted, complex, dynamic variable in a complex system that is subject to influence from

other environmental or contextual factors across time.

Learner motivation is likely the result of not one system alone, but rather a series of systems interacting on different scales. These nested systems include systems internal and external to the language learner. Internal to the learner is a conglomerate subsystem made up of the learner's cognition, motivation and affect (Dörnyei, 2009b; Waninge et al., 2014). External variables include any number of contextual factors outside of the language learner, including the language classroom and the larger socio-cultural and educational context. Language learners' motivation cannot be uncoupled from its environment as the language learner both influences and is influenced by the language learning context and the larger social environment. Language learners can lose motivation or become demotivated due to a diverse array of factors internal and external to the language learner.

The above characteristics of language learner motivation have implications in regard to how to effectively investigate dynamics of learner motivation. The following chapter will provide a rationale and explanation of the research methodology leveraged, and explain how the above summarized characteristics of motivation shape the design of the current study.

Chapter 3 Methodology

Section 3.1 Introduction

The purpose of this chapter is to explain and justify the methodologies used to investigate the motivational dynamics of EAP learners and to identify salient demotivating and motivating factors. It begins by highlighting the research philosophy of the study, including the ontological, epistemological, and theoretical frameworks that shape the research design. It details the qualitative and quantitative research methodologies adopted and provides a rationale for their use. It also outlines the stages of research, describes the research setting and participants, and details the instruments used for collecting data. Lastly, it describes the data collection and analysis procedures, thereby helping readers to understand the major findings and conclusions of the study.

Section 3.2 Research Philosophy

This section outlines the research philosophy informing the study; it explains the ontological, epistemological, and theoretical frameworks adopted. To begin with, the literature review in Chapter 2 revealed that motivation is extremely complex and difficult to measure objectively. Dörnyei and Ushioda (2011) pointed out that there are no purely objective measures of the abstract concept of motivation, and therefore research on motivation will always have an element of subjectivity. The literature review also highlighted how language learner motivation is inseparable with the educational and social environment of the learner. For this reason, this thesis embraces an ontology that recognizes the importance of both the natural and psychological or socially constructed worlds. A pragmatic position with a mixed

methodology is adopted for the study's philosophical orientation. Johnson and

Onwuegbuzie (2004) explained this position in the following manner:

> Philosophically, mixed research makes use of the pragmatic method and system of philosophy. Its logic of inquiry includes the use of indication (or discovery of patterns), deduction (testing of theories and hypotheses), and abduction (uncovering and relying on the best of a set of explanations for understanding one's results). (p. 17)

Given that the purpose of this study is to discover patterns of motivational dynamics

of language learners, and the uncovering of the best explanation for those patterns,

the use of the pragmatic method is justified.

Furthermore, this research rejects reductionism, opting instead to embrace

complexity. Davis and Sumara (2006) have argued that complexity thinking is

compatible with pragmatist philosophy:

> Complexity thinking is fully consistent with a science that is understood in terms of a disciplined, open – minded, evidence – based attitude toward the production of new, more useful interpretive possibilities. On this count, complexity thinking is compatible with pragmatist philosophy, in which truth is understood in terms of adequacy, not optimality. (p. 26)

A major reason why CDST has been chosen for the study's theoretical framework is

because it goes beyond the limitations of traditional cognitivist based research that

can only provide "a freeze frame/snapshot perspective on motivation" of groups of

individuals (Schumann, 2015, p. XV); CDST allows for insights into the processes

that lead to changes in motivation of individual language learners. By choosing a

CDST approach to understanding L2 motivational dynamics the study answers the

call of Chong, Renandya, and Ng (2019) to use "less commonly applied theoretical frameworks such as DST to analyse demotivation and also explore the issues surrounding demotivation further with mixed research methods such as case studies and ethnographies" (p. 71). Others, such as Kikuchi (2017) and Li & Zhou (2017) have made similar calls for research into motivational dynamics and learner demotivation.

The entire purpose of the study, as encapsulated in the research questions given in Chapter 2, is to understand the motivational dynamics of EAP learners and to identify salient demotivating and motivating factors that account for these dynamics. Reductionism based methodologies have been criticized as being unable of providing an in-depth motion capture picture of individuals' motivational dynamics (Henry, 2015). Relying solely on cognitive-based researched methodologies such as questionnaires to capture cross-sectional photographic stills would have been problematic for the current study because, as van Geert (2011) explains,

> Models based on aggregated data from individuals have no logical bearing on models of individual processes. Molenaar (2008) calls this the ergodicity principle. He and his collaborators have shown that the implicit step, so common in behavioral sciences, from sample-based research to individual process statements is often demonstrably incorrect. (p. 275)

The point that traditional Gaussian statistics based research is unable to account for processes related to individual language learners has also been made by others, such as Lowie and Verspoor (2015):

> If we are interested in grand sweep effects that may be generalizable to large populations of learners, we will have to carry out group studies with representative samples that can be analysed using Gaussian statistics based on the normal distribution. But if we are interested in how an individual learner progresses over time as a result of changing variables in a changing context, we will have to conduct longitudinal studies and use nonlinear methods of analysis. (p. 63)

As motivation is now viewed as a process unique to every individual, with each learner's self system having a different fundamental landscape (Mercer, 2015), a CDST approach is merited.

Using a CDST approach is not without its challenges (see section 2.4 in Chapter 2 for a discussion of such challenges). Despite these specific challenges for all researchers and CDST research being "a challenge, especially for new researchers in the field, such as those doing studies as part of a Masters or PhD programme" (MacIntyre et al., 2015, p. 420), a CDST approach has been adopted because ultimately it "makes us deal with the way the world actually works, not simply the way we all think it works" (Schumann, 2015, p. xviii).

With regard to epistemology, the current study accepts fallibilism. Fallibilism is the philosophical view that "we are fallible", that "we also have quite a bit of knowledge" and "[d]espite our tendency to get things wrong occasionally, we get it right much more of the time" (Reed, 2002, p. 143). Reed (2002) argues that nearly all contemporary theories of knowledge are essentially forms of fallibilism. The reason why fallibilism has been accepted as the underpinning epistemology is because it is not possible to objectively identify and measure every single motivating and demotivating factor that affect students' motivation across every single time scale.

Furthermore, motivation is subjective by nature; students may struggle to quantify or qualify their motivation, and researchers may misinterpret students' comments. Acknowledging this, every effort has been taken to keep subjectivity to a minimum, these efforts will be described in greater detail below in the instrumentation and data collection and analysis sections.

To summarize the research philosophy of this study, pragmaticism is its ontology, fallibilism its epistemology, and CDST serves as its theoretical framework and lens.

Section 3.3 Methodology of the Study

For several reasons, it was decided that a mixed-methodology research design would be best suited for finding answers to the research questions. Mixed-methodology research, the "third methodological movement" (Tashakkori & Teddlie, 2003, p. 5), has been defined as:

> the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the purposes of breadth and depth of understanding and corroboration. (Johnson, Onwuegbuzie, & Turner, 2007, p. 123)

It therefore provides "multiple ways of seeing and hearing… multiple standpoints on what is important" (Greene, 2007, p. 20). According to Creswell and Clark (2018), researchers who leverage a mixed methodology collect and analyze both qualitative and quantitative data in order to answer specific research questions or hypotheses; the researcher combines the two different types of data in their results; and frames the research design within theory and philosophy. In other words, "it combines a methods, research design, and philosophy orientation" (p. 37).

Creswell and Clark suggest that a mixed method research design may be appropriate for the following research contexts (pp. 39-44):

1. When one data source may be insufficient
2. When it is necessary to obtain more complete and corroborated results than a mono-method research design would afford
3. When there is a need to explain initial results (secondary data helps elucidate the initial data collected)
4. When there is a need to explore before administering instruments
5. When there is a need to enhance an experimental study with a qualitative method
6. When comparing different types of cases
7. When there is a need to involve participants in the study
8. When there is a need to develop, implement, and evaluate a program

As the research context of the current study relates to points one through four, six and seven listed above, a mixed method research design was deemed appropriate. Take point number one above, for example. The literature review conducted in Chapter 2 suggests that L2 motivation is influenced by a variety of systems and factors internal and external to the language learner. Data from one source may be insufficient to capture the complex, dynamic, non-linear interaction between these systems and factors. A mixed methodology, however, would allow for the leveraging of quantitative questionnaires that measure motivation constructs (e.g. L2 ideal self, instrumentality) as well as qualitative instruments that allow for discussion with and clarification from students regarding the diverse array of internal and external contextual factors that shape their motivation. A mixed methodology therefore affords a breadth and depth of understanding and corroboration that would be lacking if only one methodology was employed (Creswell & Clark, 2018). Due to the complexity of motivation a mixed methodology was employed in order to allow for

an in-depth understanding of the dynamics of motivation through the corroboration of data by means of triangulation.

To be specific, three forms of triangulation were leveraged in the current study: methodological triangulation, data triangulation, and time triangulation. Methodological triangulation, or the use of multiple methods of collecting data (Allwright & Bailey, 1991) affords the researcher with different perspectives on the phenomenon under investigation. Methodological triangulation also strengthens the trustworthiness of a study as it protects the study from errors associated with using only a single particular methodology (Patton, 1990). Data triangulation refers to the utilization of a variety of data sources or subjects (Lunenburg & Ibry, 2008). Time triangulation is the leveraging of data collected at different times. All three forms of triangulation described above were used to ensure the findings of the study are valid.

Research instruments leveraged to explore motivational dynamics of EAP learners and salient motivating/demotivating factors include a motivation questionnaire, motivation journals, semi-structured interviews, focus groups discussions, and a demotivation questionnaire. To summarize, the rationale for using a mixed-methodology and the instruments listed above was that such an approach would result in a multiplicity of perspectives on EAP learners' motivational dynamics that accounted for contextual factors (both in the environment and across time), and because it is in line with calls of recent literature to avoid using only quantitative research methods in exploring learner motivation.

The research design of the study was comprised of two major stages. The first stage of the study occurred over 10 weeks and sought to take a motion-capture picture of the motivational dynamics of 60 EAP learners in their first year at XJTLU. It also sought to identify the salient demotivating and motivating factors that accounted for the changes in the motivational disposition of these learners. A variety of subjects participated, coming from five EAP teachers' standard and advanced level EAP classes. The second stage of the study attempted to capture a photographic still of how frequently the larger student population of the university experienced the demotivating factors identified from stage one of the research. The purpose of this second stage was to investigate whether the larger student body had a similar or different experience with the 60 students in stage one, in regard to demotivating experiences and factors.

In Stage 1 of the research, a motivation questionnaire measuring a variety of constructs related to motivation was administered at two points in the second semester of students' freshmen year: once in week two, and again in week eleven of the semester. In other words, the same motivation questionnaire was administered to the same group of students in the first and last week of the ten-week long data collection period in the first stage of this study. The aim of administering these questionnaires was twofold: first, it provided a window into the motivational profile of individual students; second, it provided an opportunity to observe potential changes in the measured motivation constructs.

As the motivation constructs measured (e.g. Ideal L2 Self, Parental Encouragement / Family Influence) were unlikely to change drastically over the time scale of ten

weeks, motivation journals were leveraged to track changes in students' daily motivational disposition levels (i.e. students' willingness to expend effort on studying and learning EAP). Qualitative data were obtained from interviews and focus groups with the purpose of shedding light on comments made by students in their motivation journals and to further explore the salient demotivating and motivating factors experienced by the students. The data was then coded and analyzed to identify the salient demotivating and motivating factors as reported by the students during this period, thereby addressing the second and third research questions.

The third research question, which focuses on identifying salient demotivating factors, was further explored by means of the demotivation questionnaire leveraged in Stage 2 of the study. This demotivation questionnaire was created based on the salient demotivating factors experienced by the 60 students in Stage 1 of the study, and was administered to the larger student body.

Conducting the research in this manner allowed the focus of the inquiry of motivation to shift from the micro (individual) to the macro (student body), and also capture the process and products of motivational phases. Tables 3.1 and 3.2 summarize the research design described above.

This brief overview of the research design, its stages, and instruments, serve as a primer for the details of the instruments and data collection and analysis procedures which follow. A brief introduction to the research setting will be given next.

Following this, details of the instruments and data collection and analysis procedures will be organized according to the research questions that guide the study.

Table 3.1 Summary of research questions, stages, instruments, and purposes of instruments

Research Questions	Stage(s) investigated in	Instrument	Purpose
1. How does motivation of EAP learners at a TNE EMI university change over the course of a semester in their first year?	Stage 1	Motivation Questionnaire	Explore potential changes in motivation constructs (e.g. L2 self guides, instrumentality) and collect biographic information.
		Motivation Journals	Track changes in motivational disposition of individual students. Understand why these changes occurred.
		Interviews	Further explore the trajectories of students' motivational disposition.
		Focus Group Discussions	Further explore the trajectories of students' motivational disposition.
2. What are the salient motivating factors for these students?	Stage 1	Motivation Journals	Identify salient motivating factors and their contexts.
		Interviews	Same as above.
		Focus Group Discussions	Same as above.
3. What are the salient demotivating factors for these students?	Stage 1	Motivation Journals	Identify salient demotivating factors and their contexts.
		Interviews	Same as above.
		Focus Group Discussions	Same as above.
	Stage 2	Demotivation Questionnaire	Understand how frequently the demotivating factors identified in Stage1 of the study affect the larger student population.

Table 3.2 Gantt chart of the research design

Stage	Semester	Objective	Week of semester	Motivation Questionnaire	Motivation Journals	Interviews	Focus Group Discussions	Demotivation Questionnaire
Stage 1	Spring 2019	Data collection	2	X	X			
			3		X			
			4		X	X		
			5		X			
			6		X	X		
			7		X	X		
			8		X	X		
			9		X			
			10		X	X		
			11	X	X		X	
	Summer 2019	Coding and analysis of data from Stage 1, including the identifying of salient demotivating factors						
Stage 2	Fall 2019	Data collection	13					X
			14					X

Section 3.4 Research Setting and Participants

As mentioned in Chapter 1, the study took place at Xi'an Jiaotong-Liverpool University. Established in 2006, XJTLU is a Sino-British joint venture private university located in Suzhou, Jiangsu Province, near the east coast of China. Accredited by the University of Liverpool (UoL), XJTLU offers undergraduate students' dual degrees: a UK degree awarded by the UoL and a Chinese degree by XJTLU. It is a TNE EMI university that uses English as the *lingua franca* of the university. Given that nearly all courses are taught in English, students are required in their first two years to enrol in EAP study skills and language courses.

Section 3.4.1 Stage 1 Participants

All participants in Stage 1 were first-year students enrolled in EAP classes. Table 3.3 shows biographical information about the 60 participants, including their gender, age, nationality, and major. Furthermore, it also shows what degree they participated in the study (i.e. how many weeks they completed in their motivation journal, whether or not they completed the motivation questionnaire in weeks two and eleven, and whether or not they were interviewed or participated in the focus groups). Participants' identities were protected by assigning them each a code. All participants with codes beginning with A, B, or C, were enrolled in a first-year EAP for Built Environment module comprised of architecture, urban planning and development, and civil engineering majors, albeit with different teachers (A, B, C respectively). Participants with codes beginning D and E had the same teacher, but were enrolled in different sections of an EAP analytical writing course for advanced students (in other words, the same teacher taught the course to two different groups of students, groups D and E). This means that students in classes A, B, and C had

lower English language proficiency levels than students in classes D and E. Students with D and E codes came from a diverse array of majors.

All students' participation was voluntary, and students were recruited by means of convenience sampling. The author first identified teachers who were willing to help with the data collection. Additional teachers and students were invited to participate until 60 students had been recruited. This number was likely large enough to allow for micro- and meso-levels of analysis.

In total, there were 18 male and 42 female students. These students were between the ages of 18 and 20. The vast majority of the students were of Chinese nationality, with one Russian, one Tanzanian, and three Indonesian students being exceptions. The most common major amongst the students was architecture (17), followed by urban planning and design (9), economics and finance (6), biological sciences (4), financial mathematics (4), civil engineering (3), economics (3), architectural engineering (2), applied mathematics (2), information and computing science (2), accounting (2), computer science and technology (2), digital media arts (2), actuarial science (1), and international business with a language (1).

Table 3.3 Stage 1 participants

Code	Gender	Age	Nationality	Major	MJ	MQ1	MQ2	INT	FG
A2	M	19	Chinese	ARC	10	YES	YES	-	-
A3	F	18	Chinese	ARCE	10	YES	YES	-	-
A4	F	19	Chinese	ARC	10	YES	NO	W4	-
A5	M	18	Chinese	CE	10	YES	NO	-	-
A6	F	18	Chinese	UPD	10	YES	YES	-	-
A7	M	18	Chinese	UPD	10	YES	YES	W10	2
A8	M	18	Chinese	UPD	9	YES	NO	W6	-
A9	F	19	Chinese	ARC	10	YES	YES	-	2
A10	M	19	Chinese	CE	10	YES	YES	-	-
A11	F	18	Chinese	ARC	10	YES	NO	-	2
A12	M	18	Chinese	UPD	10	NO	NO	-	-
A13	M	19	Chinese	UPD	10	NO	NO	-	-
A14	M	18	Chinese	UPD	10	YES	YES	-	-
A15	F	18	Chinese	ARC	10	YES	NO	-	-
A16	F	18	Chinese	ARC	10	YES	YES	-	2
A17	M	18	Chinese	CE	10	YES	NO	-	-
B1	F	18	Chinese	ARC	10	NO	NO	-	-
B2	M	18	Chinese	ARC	10	YES	NO	-	-
B3	F	19	Chinese	ARC	10	YES	YES	W10	-
B4	F	19	Chinese	ARC	10	YES	NO	W4	-
C1	F	19	Chinese	ARC	5	YES	NO	-	-
C3	F	18	Chinese	ARC	10	YES	NO	W4	-
C4	F	18	Chinese	UPD	9	YES	NO	-	-
C5	F	19	Chinese	ARC	7	YES	NO	-	-
C6	F	19	Chinese	ARCE	5	NO	YES	W10	-
D1	M	18	Chinese	ARC	9	YES	YES	W7	1
D2	F	18	Indonesian	ARC	10	YES	NO	-	-
D3	F	19	Chinese	ACC	10	YES	YES	-	-
D4	F	19	Chinese	AS	10	YES	NO	-	-
D5	F	18	Chinese	AM	9	YES	NO	-	-
D7	F	19	Chinese	ECO	10	YES	NO	-	2
D8	M	19	Chinese	BS	9	YES	NO	-	1
D9	F	18	Chinese	EF	3	YES	NO	-	-
D10	F	18	Chinese	FM	4	YES	NO	W4	-
D11	F	19	Chinese	BS	10	YES	YES	-	-
D12	F	18	Chinese	ARC	6	NO	NO	-	-
D13	F	18	Chinese	ICS	9	YES	YES	-	-
D14	F	18	Chinese	EF	9	YES	YES	W7	-
D15	F	18	Chinese	AM	10	YES	NO	-	1
D16	M	18	Chinese	ICS	10	YES	YES	-	1
D17	F	18	Chinese	FM	10	YES	NO	-	2
D18	F	19	Chinese	EF	10	NO	YES	-	-

D19	F	19	Chinese	EF	10	YES	NO	-	-
D20	F	19	Chinese	ACC	10	YES	NO	-	-
E1	F	19	Indonesian	FM	10	YES	NO	-	-
E2	M	18	Chinese	CST	9	YES	YES	W10	-
E3	F	18	Indonesian	BS	9	YES	YES	-	-
E4	F	18	Chinese	FM	10	YES	YES	-	-
E5	F	19	Chinese	EF	6	YES	NO	W4	-
E6	F	18	Chinese	CST	6	YES	YES	-	-
E7	M	18	Tanzanian	ARC	6	NO	NO	-	-
E8	M	19	Russian	IBL	10	YES	YES	-	2
E9	F	19	Chinese	UPD	8	NO	YES	W7	-
E10	F	19	Chinese	DMA	9	YES	NO	-	-
E11	M	19	Chinese	DMA	10	YES	YES	-	-
E12	F	20	Chinese	EF	10	YES	YES	-	-
E13	F	18	Chinese	ECO	9	YES	NO	W8	-
E15	F	19	Chinese	BS	5	YES	NO	-	1
E16	M	19	Chinese	ECO	1	NO	NO	-	-
E17	F	18	Chinese	UPD	3	YES	YES	W10	-

Note: MJ = Motivation Journal (weeks 2-11), MQ1 = Motivation Questionnaire 1 (week 2), MQ2 = Motivation Questionnaire 2 (week 11), INT = Interview, the week number in which the interview was conducted is given, FG = Focus Groups (week 11), the number of the focus group is given, ARC = Architecture, ARCE = Architectural Engineering, CE = Civil Engineering, UPD = Urban Planning and Design, AS = Actuarial Science, AM = Applied mathematics, ECO = Economics, BS = Biological Sciences, EF = Economics and Finance, FM = Financial Mathematics, ICS = Information and Computing Science, ACC = Accounting, CST = Computer Science and Technology, IBL = International Business with a Language, DMA = Digital Media Arts

Section 3.4.2 Stage 2 Participants

All participants in Stage 2 were XJTLU students who were at the time enrolled in or had previously been enrolled in EAP classes. Out of the total number of participants who fully completed the survey (n=1517), 59.4% were female (n=901), and 40.6 % were male (n=616). The vast majority (96.3 %) of the students were Chinese nationals (n=1461); only 3.7% of the participants were of other nationalities (n=56). In regard to students' year of study, the majority of students (65%, n=986) were freshmen. 24.9% (n=377) were sophomores, 6.7% (n=102) were juniors, and 3.4% (n=52) were seniors.

Section 3.5 Instrumentation and Data Collection and Analysis Procedures Related to RQ1

In Stage 1 of the research, the motivational dynamics of 60 first-year students were explored over a period of 10 weeks by means of a motivational questionnaire and motivation journals. The motivational questionnaire explored changes in motivation constructs (e.g. Ideal L2 Self, instrumentality) and the motivation journals explored how and why motivational disposition to study EAP changed from day to day. Semi-structured interviews, and focus group discussions were also leveraged to more fully understand the how and why of changes in motivational disposition.

Section 3.5.1 Motivation Questionnaire

Section 3.5.1.1 Construction of Motivation Questionnaire

The use of questionnaires is one of the most common research methods in L2 research; its popularity of use is largely because of its efficiency and versatility, saving the researcher time, effort, and financial resources (Dörnyei & Taguchi, 2010). Copious amounts of data can be collected from large samples of the target population. Their versatility lies in being able to explore a variety of people, topics, and situations (Dörnyei & Taguchi, 2010).

The motivation questionnaire used in this research to explore changes in motivation constructs was adapted from Taguchi, Magid, and Papi's (2009) study (see also Dörnyei & Ushioda, 2011, pp. 275-283). As the original questionnaire was not administered in the context of EAP or TNE, several modifications to the questionnaire constructs and items were made in order to make the research instrument more suitable for the context of XJTLU. Some, but not all of the

constructs of the original questionnaire were included in the motivational questionnaire leveraged in the current study. These constructs include: *Intended Effort, Ideal L2 Self, Instrumentality (promotion), Instrumentality (prevention), Linguistic Self-confidence, Ethnocentrism, Parental Encouragement / Family Influence, Attitudes to Learning English, Attitudes towards L2 Community, Integrativeness*, and *English Anxiety*. The constructs of *Cultural Interest, Travel Orientation, Ought-to L2 self*, and *Fear of Assimilation* were not included because they were either (1) deemed irrelevant to the EMI-TNE context of XJTLU, (2) shown in previous studies to not carry as much significance as other constructs in the context of enquiry (see for example You & Dörnyei, 2016), and (3) removed for the sake of reducing the number of items on the motivation questionnaire, as questionnaires overly long can be counterproductive (Dörnyei & Taguchi, 2010). Furthermore, the motivation constructs of *Integrativeness* and *Attitudes Towards L2 Community* were combined into one single concept: *Integrativeness*. This was done in order to simplify the survey, given that *Attitudes Towards L2 Community* is arguably a part of *Integrativeness.*

The construct of *Fear of Assimilation* was altogether deleted as students enrolled in a TNE-EMI university are unlikely to be concerned about losing their Chinese identity, values, or language because of internationalization. In addition, some original items were problematic because of the wording related to English courses can be confusing in the EMI-TNE context where all classes are taught in English. The item *I have to learn English because I don't want to fail the English course*, in the construct of *Instrumentality (prevention),* for example, is problematic because students could interpret 'English course' in the EMI-TNE context either as students' English for

Academic Purposes class, or potentially any of their other classes that are taught in English.

To prevent such confusion from occurring, some items that might be ambiguous in the TNE-EMI context had to be tweaked or separated into two different items to draw a clear distinction between EAP classes and other classes that are taught in English. For example, students might feel a need to study EAP because they do not want to fail their EAP course. Yet, students might also feel a need to study EAP because they do not want to fail their other courses that are taught in English. Consequently, the original item '*I have to learn English because I don't want to fail the English course*' was divided into two items: '*I have to learn academic English because I don't want to fail my Language Centre EAP class*' and '*I have to learn academic English because I don't want to fail non-Language centre classes that are taught in English*'.

It is beyond the scope of this section to highlight every change that was made to individual items and constructs of the original Taguchi, Magid, and Papi (2009) questionnaire. The final adapted questionnaire can be found in Appendix 1. This questionnaire includes ten motivation constructs: *Intended effort, Ideal L2 Self, Instrumentality (promotion), Instrumentality (prevention), Linguistic Self-confidence, Ethnocentrism, Parental Encouragement / Family Influence, Attitudes towards Learning English, Integrativeness,* and *English anxiety*. These constructs were measured by a total of 48 Likert scale items on a six-point scale. A six-point scale was used out of concern that some respondents might avoid making a real choice by always selecting the neutral option available in an odd numbered Likert scale (see

Dörnyei &Taguchi, 2010, p. 28 for a discussion on the topic). In addition, the questionnaire had seven demographic questions, and an open-ended question regarding demotivating experiences in the students' educational history.

Section 3.5.1.2 Piloting the Motivational Questionnaire

In order to collect feedback about how the motivational questionnaire would work, the adapted questionnaire was piloted in several ways in an attempt to highlight potential problematic items (e.g. ambiguous wording or the English being too difficult to understand) and to gain insight into the clarity of the instructions. Dörnyei and Taguchi's (2010) suggestion of conducting an initial piloting of the item pool and a final piloting of the entire questionnaire was followed.

The pilot questionnaire was first administered to twenty EAP students who carefully examined the wording in the instructions and items. They were asked to mark any item whose wording was unclear or confusing in any way. Based on their feedback minor changes to word choice were made to the instructions and to a few items to enhance clarity. For example, the item *'I have to learn academic English because I don't want to fail my EAP class'* was changed to *'I have to learn academic English because I don't want to fail my Language Centre EAP class'*. Items were then randomized.

The final piloting of the motivation questionnaire was administered more broadly so that an item analysis could be conducted to fine-tune and finalize the questionnaire. The questionnaire was administered online via Qualtrics.com, towards the end of the Fall 2018 semester. Responses that were incomplete, or were not given sincerely

(answering "1" for each Likert scale item) were deleted. Responses that took shorter than 6.5 minutes to complete were deleted, as the questionnaire was administered to several native speakers who could complete the questionnaire no faster than in 6.5 minutes. Only a portion (n=300) of the total initial responses (n=518) were actually used for item analysis. Based on the 300 valid responses gathered, the Cronbach Alpha coefficients for multi-scale items were calculated to check for internal consistency of each measured construct. The Cronbach Alpha coefficient for each multi-scale item and motivation construct are given in Appendix 2. Items A6, C2, C5, D5, F1, G2, and H1 were deleted to increase the Cronbach Alpha coefficient of the constructs as well as to reduce the number of items on the final questionnaire. The practice during the piloting of calculating the correlation coefficients of each item with the total scale score and retaining the items with the highest correlations is standard practice (Dörnyei & Taguchi, 2010). The resulting Cronbach Alpha and Omega coefficients for each motivational construct are listed in Table 3.4.

Table 3.4 Cronbach Alpha and Omega coefficients for motivational constructs measured by the final pilot of the motivation questionnaire

Motivation Construct	Cronbach Alpha	Omega
Intended Effort	.665	.668
Ideal L2 Self	.803	.802
Instrumentality (Promotion)	.722	.724
Instrumentality (Prevention)	.852	.852
Linguistic Self-confidence	.717	.716
Ethnocentrism	.610	.629
Parental Encouragement / Family Influence	.807	.806
Attitudes Towards Learning English	.807	.807
Integrativeness	.647	.653
English Anxiety	.834	.837

Given that all of the motivation constructs had a Cronbach Alpha coefficient greater than the suggested lower threshold of .6 (Dörnyei & Taguchi, 2010, p. 95), and the Cronbach Alpha coefficient for the entire instrument was .861, the reliability of the instrument was considered acceptable and the survey ready for actual use.

Section 3.5.1.3 Final Version of the Motivation Questionnaire

The final motivation questionnaire used with the main 60 participants in the first stage of the study consisted of three parts. Table 3.5 shows the structure of the questionnaire, including the parts, sub-category, number of items, item codes, and question numbers. The complete version of the questionnaire is located in Appendix 1.

Table 3.5 Structure of the final version of the motivation questionnaire

Part	Sub-category	Number of Items	Item Codes	Question Numbers
A	Intended effort	5	A1, A2, A3, A4, A5	28, 33, 23, 7, 30
	Ideal L2 self	6	B1, B2, B3, B4, B5, B6	34, 11, 2, 9, 4, 18
	Instrumentality (promotion)	5	C1, C3, C4, C6, C7	32, 17, 16, 22, 35
	Instrumentality (prevention)	6	D1, D2, D3, D4, D6, D7	3, 31, 13, 14, 21, 10
	Linguistic self-confidence	4	E1, E2, E3, E4	20, 12, 8, 19
	Ethnocentrism	4	F2, F3, F4, F5	1, 26, 29, 6
	Parental encouragement	5	G1, G3, G4, G5, G6	24, 15, 27, 25, 5
B	Attitudes towards learning English	3	H2, H3, H4	43, 48, 45
	Integrativeness	5	I1, I2, I3, I4, I5	46, 47, 37, 44, 41
	English Anxiety	5	J1 J2, J3, J4, J5	36, 39, 42, 38, 40
C	Demographic and background information	11		49-59

Part A consisted of 35 Likert-scale items in the form of statements. Participants were asked to respond to each item by explaining how much they agree or disagree with the statement by choosing an answer on a six-point Likert-scale ranging strongly disagree to strongly agree (1 – strongly disagree, 2 – disagree, 3 – slightly disagree, 4 – slightly agree, 5 – agree, 6 – strongly agree). Responses at the higher end of the scale mean different things according to the motivation construct being measured. For example, items measuring Intended Effort, a high response suggests that the participant is more willing to expend effort in learning English and EAP; e.g. A1 *If an EAP course was offered in the future I would like to take it*.

High responses to items related to Ideal L2 Self suggest that the participant may be motivated by imagined an Ideal L2 self that can use English competently; e.g. B5 *I can imagine myself speaking English fluently in academic or professional contexts.* For items related to Instrumentality (promotion), a high response would signify that the participant sees instrumental value in learning EAP because it enables him/her to improve his/her life; e.g. C1 *Studying EAP is important to me because I think it will someday be useful in getting a good job.* Answers at the higher end for items measuring Instrumentality (prevention) suggest that participants place value on learning EAP in order to avoid negative effects or punishments; e.g. D4 *I have to study academic English because I don't want to get bad marks in non-Language Centre classes that are taught in English.* In regards to Linguistic Self-confidence, high responses signify the participant has high linguistic self-confidence; e.g. E4 *I am sure I have a good ability to learn academic English.* Items related to Ethnocentrism probed to what degree the participants are ethnocentric; the higher the response the more ethnocentric the participant; e.g. F5 *Most other cultures are*

backward compared to my Chinese culture. Lastly, high responses to items related to Parental Encouragement / Family Influence suggest that participants feel pressure to study English from their parents and/or other family members; e.g. G1 *My family puts a lot of pressure on me to study English.*

Part B was comprised of 13 Likert-scale items in the form of questions. Participants were asked to respond to each item by choosing an answer on a six-point Likert-scale ranging from not at all to very much (1- not at all, 2 – not so much, 3 – so-so, 4 – a little, 5 – quite a lot, 6- very much).

For items related to Attitudes towards Learning English, a high response would denote that the participant maintains a positive attitude towards learning EAP; e.g. H4 *Do you really enjoy learning academic English?* Answers at the higher end for items measuring Integrativeness suggest that participants have a strong desire to integrate with the L2 community, in this case participants' current or future academic or professional community; e.g. I5 *How much would you like to become similar to the people who speak English in your chosen profession?* Lastly, high responses to items related to English Anxiety suggest that the participants feel anxious or nervous when using English, especially in an academic context such as a university; e.g. J1 *How nervous do you get when you are speaking English in your Language Centre EAP class?*

Part C included questions to gather information on participants' backgrounds, which was considered to be helpful with understanding the rest of the data, such as gender, nationality, age, the student's major, year of study, English proficiency level (based

on which pathway the student was placed – foundation, standard, or advanced). This section also included tracking information such as the last five digits of the participant's phone number (so that data from the survey could be connected to the data from the motivation journals). There was one open ended question which aimed to elicit the students' previous history of being demotivated to study English. Lastly, one five-point Likert-scale item was included to assess student motivation to study EAP at the time of completing the motivation questionnaire (week two and 11 of the semester).

Section 3.5.2 Data Collection and Analysis Procedures Relating to the Motivation Questionnaire and RQ1

 The motivation questionnaire was administered twice during the first stage of data collection: at the beginning of the ten-week data collection period (week two of the Spring 2019 semester), and then again at the end of the data collection period (week eleven of the Spring 2019 semester). On both occasions the questionnaire was administered electronically via Qualtrics.com.

Quantitative data collected from the questionnaire were analysed by the statistical package IBM SPSS Statistics 22. Data from incomplete responses to the motivation questionnaires were first deleted. The values of each construct of motivation (e.g. intended effort, English anxiety) were computed by taking the average of the students' scores to the corresponding items (e.g. Intended effort = (A1+A2+A3+A4+A5)/5). Descriptive statistics including the min, max, mean, and standard deviation for each item and the various constructs of motivation were then calculated. A Wilcoxon Signed Ranks Test of each motivation construct for students

who completed both motivation questionnaires in week two and 11 were then conducted to see if any significant change occurred in the motivation constructs.

Section 3.5.3 Motivation Journals

Journals, as a research tool, afford the researcher with the opportunity to collect data on participants' experiences by inviting them to document emotions, events, ideas, and information relevant to the topic under consideration (Allen, 2017c). Motivation journals were utilized in this study to explore the motivational dynamics of 60 EAP learners over a 10-week period in the first stage of research of the study. A portion of a sample blank motivation journal is given in Appendix 3. The motivation journals were divided into three basic parts. The first part of the journal was devoted to conveying information regarding the purpose of the journal, the benefits of using the journal, as well as instructions on how to complete it. The second part of the journal asked students to self-assess their motivation level to study EAP on a daily basis, including weekend days. Students were asked to first choose a level of motivation (0 – very demotivated, 1 - fairly demotivated, 2- slightly motivated, 3 – fairly motivated, and 4 – very motivated), in a similar fashion to the study conducted by Kikuchi (2017). To help students with selecting of an appropriate level of motivation, they were given a bookmark (see Appendix 4) reminding them to rate their motivation by considering the following two question, which were adapted from a study conducted by Waninge, Dörnyei, and de Bot (2014):

1. How much effort do I want to put into learning EAP?
2. How much do I enjoy learning EAP?

Students were then asked to provide a reason for selecting a particular motivation level. The last part of the journal was a weekly reflection in which students answered one or more of the following questions:

1. Did your motivation go down at any point in the week? If so, what might be the cause of this change?
2. Did your motivation go up at any point in the week? If so, what might be the cause for this change?
3. If you lost motivation and did not regain motivation, why did your motivation remain low instead of increasing?
4. If your motivation stayed the same, why did it stay the same?

Section 3.5.3.1 Piloting the Motivation Journals

An early version of the motivation journals was piloted with 8 year-two EAP students. These students were given a motivation journal and asked to complete it for a period of four weeks. Afterwards, feedback regarding the organization and wording of the motivation journal was collected. Minor changes were made to the instructions and organization of the journal to make it easier to understand; the final version being the one described in the section above.

Section 3.5.4 Interviews

While potentially time consuming, semi-structured interviews were utilized because they allow the researcher to obtain an overview of the specific phenomenon under investigation, as well as pertinent in-depth information that participants would like to share (Allen, 2017b). During Stage 1 of the study, semi-structured interviews with 15

students were conducted over a 10-week period in order to gain a more in-depth understanding of how and why year-one EAP students' motivation changes. The protocol for the interviews (see Appendix 5) included seven basic questions related to reasons why the participant's motivation level may have decreased, increased, stayed the same, or remained low; what discourages and motivates students the most to study EAP; and whether or not students had a plan to keep motivated in their English learning.

The semi-structured interviews were conducted at three points during the 10-week study. Participants were chosen at random to avoid any bias from the researcher. Five participants were interviewed during week four of the semester, an additional five were interviewed during weeks 6-8 of the semester, and a final group of five participants were interviewed in week 10 of the semester. With the consent of the students, all interviews were recorded by means of a Sony Digital Voice Recorder. All interviews were conducted in English, by the researcher, and, following Robson's (2011) suggestion, were divided into five basic phases:

1. An introduction where the interviewer introduces himself and explains the purpose of the research

2. Warm-up questions to make the student feel comfortable

3. Main body questions that focus on the main topic under investigation

4. Cool-off questions to wind down the interview

5. A conclusion where the interviewer thanks the interviewee for their contribution and time

Section 3.5.5 Focus Group Discussions

Focus groups afford the researcher with an avenue to gain insights into attitudes and behaviours of participants by interviewing a purposeful sample (Allen, 2017a). In this study, focus group discussions served as a tool to further investigate the salient motivating and demotivating factors as reported by students in their journals. As the focus group discussions were held at the very end of the first stage of research, some participants were unable or unwilling to volunteer their time as they had pressing deadlines, encroaching exams, or simply were experiencing fatigue from completing the motivation questionnaires and motivation journals. For this reason convenience or opportunity sampling was used for the focus group discussions. This type of non-probability sampling is common in L2 research if the convenience of the sample selection is a major criterion for the researcher (Dörnyei & Taguchi, 2010). The protocol for the focus group discussions can be found in Appendix 6. The 12 students who volunteered were divided into two groups: five in the first and seven in the second. Each student in both focus groups was given a list of 28 demotivating factors that were identified from students' motivation journals. This list of a diverse array of demotivating factors was cut up so that each demotivating factor was on a small thin strip of paper. Students were then asked to consider each demotivating factor and place it in one of three columns on an A3 size paper handout. These columns were listed as: things that do not affect me, things that affect me in a minor way, things that affect me in a major way (see Appendix 6 for the list of demotivating factors and associated handout). The author then led a discussion in which students were asked to identify the most frequently demotivating factors, as well as whether or not the salient demotivating factors were primarily associated with phenomena related to the EAP classroom or phenomena outside the EAP classroom. In both focus groups the

process was repeated using a list of 39 motivating factors that were identified from students' motivational journals.

Section 3.5.6 Data Collection and Analysis Procedures Relating to the Motivation Journals, Interviews

Before collecting data, all 60 participants were briefed on the purpose of the study. A motivation journal was then given to each student and a brief training was conducted to help participants to understand the purpose of the journal as well as how to complete it. Examples of daily and weekly reflections, given in the introductory part of the motivation journal, were discussed, with students given ample opportunity to ask questions.

Students enrolled in the advanced EAP course, listed in Table 3.3 with code D or E, had two EAP seminars per week, on Monday and Thursday, with a lecture held on Wednesday. During the first week of data collection these students kept the motivation journal in their possession until Thursday. From that point forward in the study, the students handed in their journals each Thursday. Students were asked to take notes of changes in their motivation for Friday, Saturday, and Sunday, and then transfer these notes to their journals when they were returned to them on Monday. While the ideal procedure would have been to have students write each day in their journals, thereby preventing the need to reflect on days past, the collecting of journals and subsequent recording of data ensured that substantial chunks of data would not be lost if a student misplaced their motivation journal.

Students in the standard EAP Built Environment classes had seminars every weekday, excluding Wednesday. Having worked with these students in this general level for several years, the author was concerned that the students in groups A-C would misplace their motivation journals if they brought them home. Because of this, the teachers of these classes handed out the motivation journals at the beginning of class each day and they collected them at the end of each class. On Thursday students reflected on their motivation levels for Wednesday and Thursday. On Monday students reflected on their motivation levels for Saturday, Sunday, and Monday. For both groups (A-C, D-E), the author collected the journals from the teachers once a week and recorded students' answers in an excel spreadsheet to prevent accidental loss of data.

After the data collection period the data was imported into NVivo 12 and coded. In order to analyse students' dynamics of motivational disposition, the data went through an initial round of coding conducted by the author. This initial round of coding was comprised of the following steps:

1. Selecting all the text of a student and coding the case (associating it with which student wrote the text)

2. Selecting the text of a week of a student and coding the week number (associating it with the week the students wrote the text)

3. Selecting the text for each day and coding the weekday or weekly reflection question number (associating a specific piece of text with which day or weekly reflection question number the students wrote the text)

4. Selecting the text for each day and coding the students' motivation level

5. Selecting the text for each day and coding the motivational change (i.e. the change in motivation level from the previous day to the current day; if the motivation level on Monday was 4 – very motivated, and the motivation level for Tuesday was 2 – slightly motivated, then the motivational change between these two days would be -2)

Following these coding steps, the average motivational disposition level of all 60 students for each day of the 10-week study was calculated. This allowed for the average motivational disposition to be plotted on a line graph and analysed for patterns. The average motivational disposition of students for each day of the week was also calculated in order to explore patterns in motivational dynamics across the week. In addition, the daily average motivational disposition levels of standard level students (A, B, & C classes) and advanced level students (D & E classes) were computed and plotted on a line graph for the purpose of identifying possible differences between the two groups.

To further investigate how and why motivational disposition to study EAP changed, qualitative data from the journals, interviews, and focus groups were coded and analysed. Data from motivation journals were coded in NVivo 12 by a team of three individuals: the author, and two EAP teachers and researchers familiar with the curricula and materials of the classes. As mentioned previously, the author completed the basic coding steps, one through five, listed above for all journals. The two other coders completed basic coding for six students' motivation journals, or roughly 10% of the total data; this permitted these two coders to become familiar with the data and to hone their experience coding with the software.

The second phase of coding was descriptive coding. Descriptive coding, also referred to as "Topic Coding", is the process in which the basic topic of a passage of qualitative data is summarized into a word or short phrase. This method of coding is appropriate for beginning qualitative researchers in learning how to code data based on interview transcripts, journals, and other similar documents (Saldaña, 2009). Following NVivo 12's strategies for teamwork ("Strategies for teamwwork," n.d.), a lead coder and editor of the codebook was chosen (the author). The NVivo file, with all basic coding completed, was designated as the master file and was set aside. Then, using descriptive coding, the author coded an entire student's motivation journal, thereby establishing the beginnings of a code book. This second NVivo file became Copy B. The master file, which at this point had no descriptive coding completed yet, was then distributed to the other team members. The other coders were also given the code book. They then, on their own, used descriptive coding to code the same student's motivation journal. Their copies became splinter copies: Copy C and Copy D. After each team member finished coding, the coding team met together to check the inter-rater reliability of the coding done so far. The splinter copies were merged and the Kappa coefficient calculated. With a Kappa coefficient of .96, the coding was considered reliable given that it well exceeded the .85-.90 minimal benchmark (Saldaña, 2009). The merged copy then became the new master copy.

The third phase of coding the data was to conduct pattern coding. Pattern codes are "explanatory or inferential codes, ones that identify an emergent theme, configuration, or explanation. They pull together a lot of material into a more meaningful and parsimonious unit of analysis… Pattern coding is a way of grouping

those summaries into a smaller number of sets, themes, or constructs" (Miles & Huberman, 1994, p. 69).

Using the new master copy, the team used pattern coding to organize the various nodes coded so far into a hierarchy. This was done together, in-person, with coding done only in complete agreement. The new master copy was then distributed, and, using the established code list and node hierarchy, each member coded an additional five journals (thereby coding roughly 10% of the total data from journals) using descriptive coding and then pattern coding. These splinter copies were then merged, and the inter-rater reliability was again calculated. With a Kappa coefficient of .95, the inter-rater reliability was deemed acceptable and a new master file was created. Naturally, there existed small differences in the node hierarchy and coding. Duplicates of codes existed due to errors in spelling from the coders. As editor of the code book, it was within my prevue to merge these codes, thereby keeping the codebook tidy and organized (Song & Kim, 2017).

At this point the inter-rater reliability of the coders had been checked at multiple points, and with the Kappa coefficient being higher than .95 or higher on each occasion, the team decided to divide and conquer the remaining journals. The remaining journals were divided into thirds and assigned to different team members. The team members then continued the cyclical pattern of descriptive and pattern coding for their respective journals. These splinter journals were then merged into a new master file, which was again, cleaned and organized by the editor of the code book.

Audio recordings of the interviews and focus groups were transcribed by the author using the online tool oTranscribe (Bentley, n.d.). The text was then imported into an NVivo 12 file for coding and analysis. Before coding a particular transcript, it was read multiple times in order to gain a good understanding of the flow of the conversation as well as the respondents' experience in learning EAP, especially in regard to motivating and demotivating factors. The transcripts were then coded by the author, using the same descriptive and pattern coding methods described above.

Once the qualitative data had been coded, it was analysed in the following ways. First, in order to gain a general understanding of what factors were affecting students' motivational disposition (i.e. why motivational disposition changes) a list of the top 25 most frequently referenced thematic codes that relate to the journals and transcriptions of the interviews and focus groups was generated. Hatch (2002, p. 155) and Saldaña (2013, p. 39) have indicated that a quantitative analysis of qualitative data, such as the calculating frequency of codes, is an acceptable practice to explore patterns in the data. In the case of the current study, the total number of references for each factor gives an indication as to what factors were frequently used by students to explain why they had a particular motivation level each day and why their motivation level changed over the course of a week. The number of references to each factor do not on its own, however, reveal if the phenomenon represented by the thematic code had a positive or negative effect on students' motivation.

Section 3.5.7 Individual Case Studies

Because individual students' motivational disposition is likely to change for different reasons, the cases of individual students must also be considered. To present an

accurate picture of how an individual student's motivational disposition changed

over time, as well as what factors were behind such changes, the cases of five

individual students were considered. These students were selected by means of

stratified random sampling. This is a form of random sampling, where a sample of a

population is divided into subpopulations (also called strata) and then a random

sample is taken from those strata (Whitely & Kite, 2012).

The strata used included gender, level of EAP class (standard or advanced), teacher,

and degree to which students participated in the research. Students were then

randomly selected until the criteria of each strata had been met. This ensured that the

students selected for the case studies had a variety of experiences (such as being in

different classes and having different teachers) and helped avoid potential bias from

the author. In regard to the degree to which students participated, it was decided to

choose students who had participated in interviews, as the interviews were

instrumental in shedding light on the data in the students' journals. It was also

decided that at least one student who quit writing in his/her motivation journal be

included, as this might indicate that the student had become demotivated to study

EAP and he/she might therefore provide insights into demotivation that other more

motivated students would be unable to offer.

Each of the five students was given a pseudonym. A profile of each student was

generated from data collected in the motivation questionnaire. This included the age,

major, English proficiency level of the student, what EAP class the student was

enrolled in, to what degree the student participated in the research, reasons for

experience demotivation to study English in the past, and their self-assessed motivation level at the beginning of the semester.

Subsequently, how the motivational disposition of each student changed over time was plotted on a line graph and analysed for patterns. Changes in motivation constructs were analysed by comparing the means of the motivation constructs measured by the motivation questionnaire in weeks two and 11. In order to understand what factors likely account for the students' changes in motivational disposition over each week, a matrix query of the week number and thematic codes was used to generate a list of the top most frequently referenced codes by week. Data from interviews with the students were then triangulated with the quantitative (motivational disposition levels each day/week) and the qualitative data from the journals (thematic codes per week) in order to explain how and why the students' motivational disposition changed (i.e. what factors were attributed to the changes).

Section 3.6 Instrumentation and Data Collection and Analysis Procedures related RQ2 and RQ3

Research questions two and three ask what the salient motivating and demotivating factors are of EAP learners at XJTLU. In Stage 1 of the study, these questions were explored by means of motivation journals, interviews, and focus groups with 60 first year EAP students. In Stage 2 of the study, research question three, concerning salient demotivating factors, was explored by means of a demotivation questionnaire that was administered to the larger population.

Section 3.6.1 Stage 1 of the Research

Given that the instrumentation and data collection procedures for the motivation journals, interviews, and focus groups have already been described in detail above, this section will now explain how the data collected from these instruments were analysed to investigate the salient motivating and demotivating factors experienced by the 60 students in the first stage of the study.

Identifying a list of salient motivating and demotivating factors proved challenging as the data revealed that a particular factor can exert a range of influences on motivational disposition at different times and in different contexts. Despite this, motivating and demotivating factors were analysed by investigating how frequently students attributed varying factors to their motivational disposition states. This was done by conducting a matrix coding query of thematic codes and self-assessed motivation levels from data in all students' journals. To further explore possible salient motiving and demotivating factors, a matrix query of the most frequently referenced codes and the change in motivation levels from one day to the next was conducted.

Three things were done to identify factors that were frequently motivating: (1), analyse the factors that frequently corresponded to positive motivation levels in students' journals (2 - slightly motivated, 3 – fairly motivated, and 4 – very motivated); (2), analyse the factors that frequently corresponded to positive changes in motivation levels (+1 to +4) from one day to the next in students' journals; and (3), analyse students' answers to weekly reflection questions in their journals where they explained why their motivational disposition improved over the week. This was

done by conducting a series of matrix coding queries: a matrix query of the 25 thematic codes that corresponded most frequently with positive motivation, a matrix query of the 25 thematic codes that corresponded most frequently with positive changes in motivation levels from one day to the next, and a matrix query of thematic codes and number of references in reflection questions in students' motivation journals that relate to positive changes. The more frequent a thematic code was found in these queries, and the more prominent position in the list of factors, suggested that the thematic code was frequently acting as a motivator for the students.

With regard to research question three and salient demotivating factors, a similar method of analysing the data was used to generate a list of factors that frequently served as demotivators: (1) analyse the factors that frequently corresponded to demotivated motivation levels in students' journals (0 – very demotivated and 1 – fairly demotivated); (2), analyse the factors that frequently corresponded to negative changes in motivation levels (-1 to -4) from one day to the next in students' journals; and (3), analyse students' answers to weekly reflection questions in their journals where they explained why their motivational disposition changed over the week. These three were done by a series of matrix coding queries: a matrix query of the 25 thematic codes that corresponded most frequently with motivation levels 0 – very demotivated and 1 – fairly demotivated, matrix queries of the 25 thematic codes that corresponded most frequently with negative changes in motivation levels from one day to the next, and matrix queries of thematic codes and number of references in reflection questions in students' motivation journals. The more frequent a thematic code was found in these queries, and the more prominent position in the list of

factors, suggested that the thematic code was frequently acting as a demotivator for the students.

Section 3.6.2 Stage 2 of the Research

With the completion of Stage 1, the qualitative data from the motivation journals, interviews, and focus groups had been coded and analysed, with salient demotivating factors being identified. Stage 2 investigated how frequently students in the larger population experienced the salient demotivating factors, which was measured by a demotivation questionnaire.

Section 3.6.2.1 Construction of the Demotivation Questionnaire

A new demotivation questionnaire was created to explore demotivating factors that lead to a decrease in students' motivation to study EAP. Content from the questionnaire came directly from the results and findings in Stage 1 of the study, in many cases directly from students' comments in their journals.

The content for items in the demotivation questionnaire was decided by looking at the frequency and strength of thematic codes that related to a decrease in the 60 EAP students' motivation levels from one day to the next during the 10-week long first stage of the study. Content related to physical health, for example, was included, because the thematic code *physical health* was the second most frequent thematic code that correlated with motivation levels of 0 (very demotivated) and 1 (slightly demotivated). *Physical health* was also always in the top three most frequent thematic codes for when any decrease in motivation occurred from one day to the next (ranging from -1 to -4). Lastly, it was the third most frequently referenced topic

in students' responses to the motivation journals weekly reflection question number one, which asked students to reflect on why their motivation went down at any point in the week.

The topic *Physical health* was then divided into specific questionnaire items by looking at the most frequent daughter codes (e.g. *feeling physically uncomfortable, staying up late* and *feeling tired*). Items in the pilot questionnaire were constructed by rewording the students' own entries in their motivation journals as possible options to the following question:

> *During your studies at XJTLU, how frequently did the following things lead to a decrease in your willingness to put effort into studying EAP?*

As an example, for item 27, *'not getting enough sleep'*, students would consider how frequently not getting enough sleep lead to a decrease in their willingness to put effort into studying EAP. Participants were asked to respond to the Likert scale items by choosing a response on a nine-point Likert-scale ranging from 1 – never, to 9 – always, as a nine-point Likert-scale affords more points of discrimination than five, six, or seven-point scales. In addition, as Wei and Hu (2019) note, Chinese students are familiar with a 9-point system used in the IELTS test.

All of the 32 Likert-scale items on the pilot demotivation questionnaire were created through the process described above. These items, therefore, relate to some of the most commonly reported demotivating factors during Stage 1 of the study, including *physical health, assignments and coursework, negative emotions* and *moods, classes*

(EAP and non-EAP related modules), *exams, significant others* (classmates, roommates, teachers, friends), *the weather,* and *entertainment*.

In addition, the pilot questionnaire had two open ended questions asking students to list any other factors inside and/or outside the EAP class that lead to a decrease in their willingness to study EAP. A single item 9-point Likert-scale item probing to what degree students agree or disagree that factors outside of EAP class have a stronger effect on their motivation to study EAP than factors inside of EAP class and six demographic questions on gender, nationality, age, major, year of study, and self-assessed English proficiency level were also included.

Section 3.6.2.2 Piloting the Demotivation Questionnaire

In order to better understand how the demotivation questionnaire would work, the questionnaire was piloted in several ways in an attempt to identify potential problematic items (e.g. ambiguous wording, English too difficult to understand) and to gain insight into the clarity of the instructions. Dörnyei and Taguchi's (2010) suggestions of conducting an initial piloting of the item pool and a final piloting of the entire questionnaire were followed.

The pilot questionnaire was first given to 30 year-one students who carefully examined the wording of the instructions and items. They were asked to mark any item that had wording which was unclear or confusing. Based on this feedback minor changes were made to the instructions and to a few items. As many students felt the consent form was too long, the most important information was highlighted and underlined to draw attention to it. Second, the wording of items related to

groupmates, classmates, friends, and teachers were changed slightly to ensure the meaning was clear to students. The item *During your studies at XJTLU, how frequently did the following things lead to a decrease in your willingness to put effort into studying EAP? 14. My groupmates,* for example, was changed to *14. The effect of my groupmates on me*. Additionally, as many students did not understand what was meant by factors inside EAP class or factors outside EAP class, examples of factors inside or outside EAP class, found in students' writing in the motivation journals, were added to provide additional clarity.

The updated version of the pilot demotivation questionnaire was administered online via Qualtrics.com during the last two weeks of the Fall 2019 semester. The total number of responses was n=179, of which there were n= 138 valid and complete responses. Responses that were incomplete, or were not given sincerely (answering "1" for each Likert scale item) were deleted. Responses that were completed in an extremely short amount of time were also deleted.

An exploratory factor analysis was conducted to explore the factorial structure of the demotivation factor scale. The assumptions for conducting a factor analysis were first checked. The Kaiser-Meyer-Olin measure of sampling adequacy indicated a strong relationship amongst variables (KMO=.851), and the Bartlett's Test of Sphericity (χ2 (496) = 2479.599, $p < .001$) suggested that the data were appropriate for being utilized for factor analysis. A KMO value between .8 and .9 is considered 'great' (Hutcheson & Sofroniou, 1999, as cited in Field, 2009, p. 647) and denotes that the sample is adequate, thereby demonstrating validity of the constructs. A Principal Component Analysis was applied as the factor extraction method. Because

the data involved humans, the factors were presumed to be interrelated (Field, 2009, p. 644), and therefore the direct Oblimin rotation was used. A scree plot and the Kaiser criterion (with eigenvalues over 1) were used, with small coefficients being suppressed with a lower cut-off point of .40. The rotation method of direct Oblimin with Kaiser Normalization converged in 22 iterations.

Following Field's (2009) advice, an analysis of both the pattern and structure matrices (both matrices are listed in Appendix 7), revealed that all items were loaded with other items under different components. As there were no outliers, no items were deleted. Items 13, 30, and 23, having to do with TV, video games, and roommates all loaded on the same component, which might suggest that entertainment and the environment in students' dormitories might be affecting students' motivation to study. In order to explore this dynamic further, one additional item was added: item 33, *The effect of the environment in my dormitory or apartment has on me.*

Section 3.6.2.3 Final Version of Demotivation Questionnaire

The final version of the demotivation questionnaire (see Appendix 8), included three parts. The first part was comprised of 33 Likert-scale items that related to some of the most common demotivating factors as reported by the 60 participants in Stage 1 of the study. These included *physical health, assignments and coursework, negative emotions and moods, classes* (EAP and non-EAP related modules), *exams, significant others* (classmates, roommates, teachers, friends), *the weather, and entertainment.* To complete these 33 Likert-scale items, participants respond to the question *During your studies at XJTLU, how frequently did the following things lead*

to a decrease in your willingness to put effort into studying EAP? by choosing a response on a 9-point Likert-scale ranging from 1 – never to 9 – always.

The second part of the questionnaire included two open ended questions that invited students to list factors inside and outside the EAP class that may lead to a decrease in their willingness to study EAP. In addition to this, there was a single item 9-point Likert-scale item asking students to what degree they agree with the statement *Factors outside of EAP class have a stronger effect on my motivation to study EAP than factors inside of EAP class.*

The third and final part of the questionnaire contained six questions to gather demographic information such as gender, nationality, age, major, year of study, and self-assessed English ability.

Section 3.6.2.4 Data Collection and Analysis Procedures of the Demotivation Questionnaire

The demotivation questionnaire was administered to 2114 XJTLU students electronically via Qualtircs.com during the 13th and 14th weeks of the Fall 2019 semester. Invitations to complete the questionnaire were sent by university email, with participation being voluntary. As some students had exams during one of these two weeks, it was decided to give students two weeks to complete the questionnaire so that they could choose a convenient time.

A large number of students completed all or portions of the questionnaire (n = 2114). Responses that were incomplete or were not given sincerely (answering "1" for each

Likert scale item) were deleted. Responses that were completed in an extremely short amount of time were also deleted. This yielded the final count of valid responses (n = 1517).

An exploratory factor analysis was conducted to explore the factorial structure of the demotivation factor scale. The assumptions for conducting a factor analysis were first checked. The Kaiser-Meyer-Olin Measure of Sampling Adequacy indicated a strong relationship amongst variables (KMO=.951). A KMO value greater than 9 is considered 'superb'(Hutcheson & Sofroniou, 1999, as cited in Field, 2009, p. 647). The Bartlett's Test of Sphericity ($\chi2$ (528) = 28545.959, p < .001) suggested that the data are appropriate for being utilized for factor analysis. A Principal Component Analysis was applied as the factor extraction method. Because the data involved humans, the factors were presumed to be interrelated (Field, 2009, p. 644), and therefore the direct Oblimin rotation was used. A scree plot and the Kaiser criterion (with eigenvalues over 1) were used, with small coefficients being suppressed with a lower cut-off point of .40. The rotation method of direct Oblimin with Kaiser Normalization converged in 15 iterations.

Following Field's (2009) advice, both the pattern and structure matrices were analysed to identify the factorial structure (both matrices are located in Appendix 16). Six factors were identified: *Physical Health, Significant Others, Poor Weather, Negative Moods and Emotions, Entertainment,* and *Lack of Focus on EAP*. The Cronbach Alpha coefficients were calculated for each factor to check for internal consistency of the measure. Table 3.6 lists each demotivating factor and its corresponding Cronbach Alpha and Omega coefficients. The internal consistency of

the items can be considered reliable given all Cronbach Alpha coefficients were all greater than .7 and the Cronbach Alpha coefficient for the entire demotivating factor scale was .949.

Once the internal consistency of the items was found to be acceptable, descriptive statistics for each of the factors were calculated. The mean of each factor indicated how frequently students found it to be a source of demotivation. The higher the mean, the more frequently the factor served as a demotivator.

Table 3.6 Cronbach Alpha and Omega coefficients for demotivating factors, as measured by the final demotivation questionnaire

Demotivating Factor and Related Items	Cronbach Alpha	Omega
Physical Health	.852	.853
1. Having lots of class on the same day		
11. Feeling tired		
18. Having a lot of deadlines in the near future		
25. Not getting enough sleep		
29. Staying up late		
31. Getting sick		
Significant Others	.879	.88
10. Finding it difficult to understand the lecturer's English (in classes other than EAP class)		
14. The effect of my group-mates on me		
15. The effect of my classmates on me		
16. The effect of my friends on me		
23. The effect my roommates have on me		
26. The effect my EAP teacher has on me		
33. The effect of the environment in my dormitory or apartment has on me		
Poor Weather	.811	.819
1. When the weather is too hot		
4. When the weather is too cold		
17. When the weather is bad		
Negative Moods and Emotions	.872	.871
2. Being in a bad mood		
3. Being uncertain about how to make progress on an EAP assignment		
6. Feeling anxious or worried		
7. Feeling sad		
24. Having a difficult EAP assignment		
28. Feeling frustrated or upset		
32. Feeling unsure about an exam		
Entertainment	.743	.744
9. Playing mobile phone games		
13. Watching TV series		
30. Playing video games		
Lack of Focus on EAP	.853	.854
8. Having no EAP class		
12. Having no assignment to work on		
19. Having no plan to study EAP		
20. Finishing an EAP exam		
21. Having no goal related to English		
22. Having a heavy workload in classes other than EAP class		
27. Exams related to classes other than EAP class		

Section 3.7 Conclusion

This chapter has outlined the steps undertaken to investigate the research questions of the study, as well as the decisions as to why a mixed methodology informed by CDST was adopted. It details the research setting, participants, research instruments, and data collection and analysis procedures. The following chapter will report the major findings of the analysis of the data.

Chapter 4 Results

Section 4.1 Introduction

This chapter presents the findings from the analysis of research data gathered by means of motivation questionnaires, motivation journals, face-to-face interviews, focus groups, and a demotivation questionnaire. The presentation of findings from analysing the data is organized according to the research questions, which are stated below:

1. How does the motivation of EAP learners at a TNE EMI university change over the course of a semester in their first year?

2. What are the salient motivating factors for these students?

3. What are the salient demotivating factors for these students?

Section 4.2 The Dynamics of Motivation of EAP Learners

The first research question concerns itself with the dynamics of motivation of EAP learners at XJTLU, that is, how and why their motivation changes over the course of a semester. This section will first summarize the participation rates for each of the instruments associated with Stage 1 of the research. Following this an analysis of the changes in motivation constructs, as measured by the motivation questionnaire in weeks two and 11 will be given. Next, trends in the changes of students' self-assessed motivational disposition scores from the motivation journals will be described. Following this the findings of an analysis of the factors that account for the changes in students' self-assessed motivational disposition scores will be given. Five individual case studies are then presented in order to capture a "motion-picture" of students' motivation and its changes over time. Finally, a CDST model and explanation of motivational disposition concludes this section.

Section 4.2.1 Participation Rates for Instruments Used in Stage 1

A quick note must be made regarding participation during Stage 1 of the research. In regard to the completion of motivation journals, all 60 participants completed at least a week in the motivation journal. The average number of weeks completed was 8.73, with the majority of students finishing the entire 10 weeks. Out of the 60 participants, 51 completed the motivation questionnaire in week two and 26 completed the questionnaire in week 11 of the semester. 15 students participated in interviews, and 12 students participated in the focus groups.

Section 4.2.2 Changes in Motivation Constructs

To begin with, possible changes in motivational constructs (e.g. Ideal L2 self, instrumentality) as measured in weeks two and 11 by the motivation questionnaire were explored by means of a 2-tailed paired sample t-test and Wilcoxon Signed Ranks Test. As mentioned above, in total, 51 of the 60 students that participated in Stage 1 of the study completed the motivation questionnaire in the first week; only 26 of the 60 students completed the motivation questionnaire in the last week of the study, likely due to a number of factors such as feeling overwhelmed by the number of assignments and exams, as well as research fatigue. In total 24 students completed the questionnaire in both weeks two and 11. Table 4.1 presents the results of the Wilcoxon Signed Ranks Test for the 24 students who completed the questionnaire on both occasions.

Table 4.1 Results of the 2-tailed paired sample Wilcoxon Signed Ranks Test of each motivation construct

Motivation Construct	M1	M2	MD	SD	Mdn1	Mdn2	IQR1	IQR2	p	d
Intended Effort	4.117	4.042	.075	.722	4.2	4.2	1	1	.529	.258
Ideal L2 Self	4.882	4.743	.139	.671	4.833	4.667	.708	.667	.43	.326
Instrumentality (promotion)	5.008	4.942	.067	.424	5	4.8	.6	.6	.48	.291
Instrumentality (prevention)	3.979	4.083	-.104	.934	4.083	4	1.208	1.417	.843	.080
Linguistic Self-confidence	4.771	4.792	-.021	.737	4.875	5	.75	.375	.986	.008
Ethnocentrism	2.479	2.646	-.167	.800	2.25	2.5	1.5	1.125	.392	.355
Parental Encouragement / Family Influence	2.742	3.225	-.483	.932	2.9	3.2	1.85	.8	.04	.926
Attitudes towards learning English	3.611	3.75	-.139	.900	4	4	1.75	1.667	.483	.289
Integrativeness	4.758	4.558	.2	.672	4.6	3.6	.65	1.2	.15	.615
English Anxiety	3.433	3.558	-.125	1.014	3.6	3.6	2.05	1.7	.321	.415

Note: The degrees of freedom for all motivation constructs is 23. Statistically significant at the $p < .05$ level.

With the exception of *Parental encouragement / family influence*, there were no statistically significant differences between the average means of motivational constructs as measured in weeks two and 11. This is likely because of two reasons. First, the difference in means for the other motivational constructs are quite small and the "greater the difference between the two means, the greater the likelihood that a statistically significant mean difference exists" (Siegle, n.d.). Indeed, the difference in mean of *Parental encouragement / family influence* was the largest. Second, the sample size of the data set is not large (n=24); a larger sample size will push down the *p*-value (Wei, Hu, & Xiong, 2019).

The results suggest that there was little actual change in means of the motivation constructs over the ten-week period of Stage 1 of the study. With exception to *Parental encouragement / family influence* ($d = .926$) and *Integrativeness* ($d = .615$), the effect sizes of the remainder of the motivation constructs are all below $d = .4$, a benchmark set by Plonsky and Oswald (2014) as "small".

In regard to *Parental encouragement / family influence*, on average, participants felt they had received more encouragement from their families towards the end of the semester in week 11 (M = 3.225) than in week two (M = 2.742, $p = .04$, $d = .926$). While not immediately apparent from the data, it is plausible that that Chinese parents, concerned for their students' academic success, pushed their children to study hard towards the end of the semester when students may be experiencing fatigue and this in turn was viewed as being encouraging by the students. It is understandable that many Chinese parents would be concerned about the academic success of their children in their first year of studying at XJTLU because of the differences in educational systems between the TNE university and Chinese secondary schools. Such differences include assignments, teaching styles, language of instruction, marking system, and autonomy given to students in decision making processes relating to when, where, and how to study.

From a CDST perspective this does not mean that motivation constructs (e.g. *L2 Ideal Self, Instrumentality*) are static and unchangeable individual differences of each student. It is possible that they may be dynamic, but changes in them may only be noticeable when a larger timescale is adopted. If these motivation constructs are fairly stable over a 10-week period, however, the question remains as to what can

account for possible changes in students' motivational disposition within the same time frame? To answer this questions data from the motivation journals, interviews, and focus groups must be considered. Findings regarding the changes in students' motivational dispositions scores will be presented next.

Section 4.2.3 Changes in Motivational Disposition Scores

Given that students were asked to record their motivational disposition to study EAP daily for a period of 10 weeks, a picture of the dynamics of the motivational disposition of students emerges by plotting self-reported motivational disposition levels on a line graph. Figure 4.1, displays the average motivational disposition of all 60 students across the 10 weeks of the study.
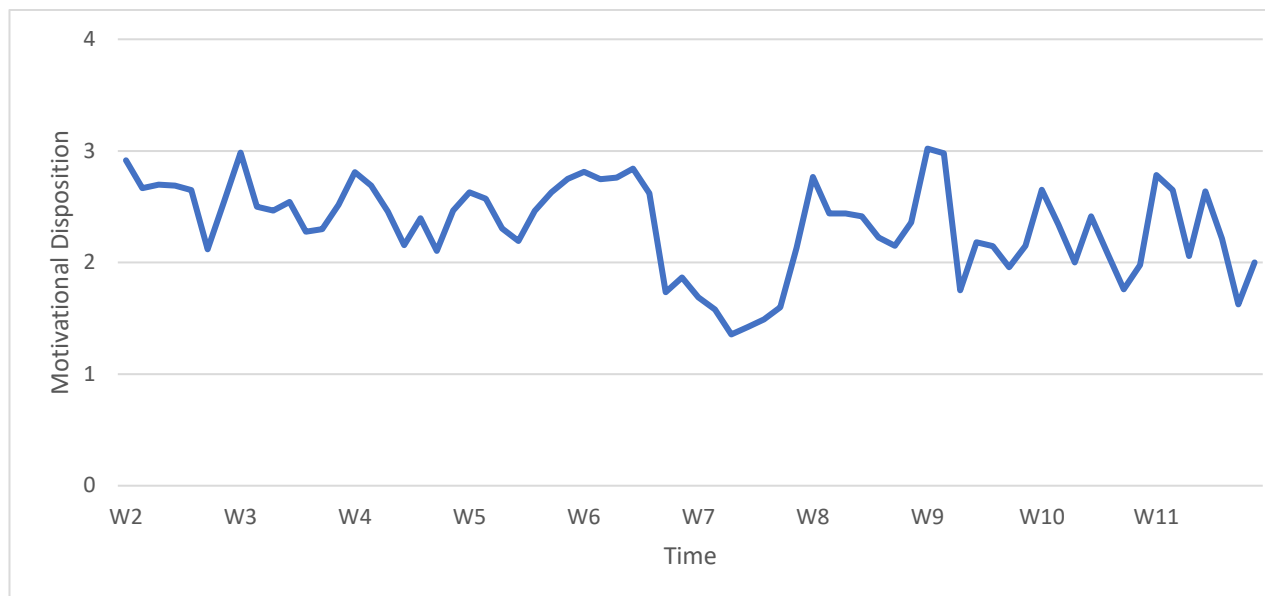
Figure 4.1 Average motivational disposition of students across ten weeks
(n = 60), 0= very demotivated, 1 = fairly demotivated, 2 = slightly motivated, 3 = fairly motivated, 4 = very motivated)

A close inspection of Figure 4.1 reveals several things. First, the average motivational disposition level of the 60 students hovers between *2 – slightly*

motivated, and *3 – fairly motivated* for the majority of the 10-week period. Second, there is a noticeable slump in week seven where the average motivational disposition approaches *1 – fairly demotivated.* This slump is due to the fact that week seven is a reading week; there are no EAP classes or exams during this week, resulting in many students using this time to travel. This slump may indicate that these learners of EAP are instrumentally and extrinsically motivated; when there is no external reason to study EAP (i.e. an assignment), then motivation quickly disappears. Third, average motivational disposition levels seemed to peak highest at the start of the school week, on Monday, and then decrease over time, ending in a slight uptick on Sunday. This is made apparent by the data reported in Table 4.2, which shows the average motivational disposition of students for each day of the week, according to their class. The average is generally higher on days when students have an EAP seminar than on those days when students do not, again suggesting the possible extrinsic and instrumental nature of their motivation.

Table 4.2 Average motivational disposition for each day of the week

Classes	M	T	W	Th	F	Sat	Sun
A-C Standard	2.792*	2.747*	2.309	2.456*	2.546*	2.155	2.365
D-E Advanced	2.625*	2.319	2.143**	2.255*	2.028	1.921	2.239
A-E All	2.706	2.516	2.228	2.349	2.256	1.998	2.277

* denotes that students had an EAP seminar during this day
** denotes that students had an EAP lecture during this day

Figure 4.2 shows the change in averages of motivational disposition of the students organized into two major groups: standard level students (A-C classes) and advanced level students (D-E classes).
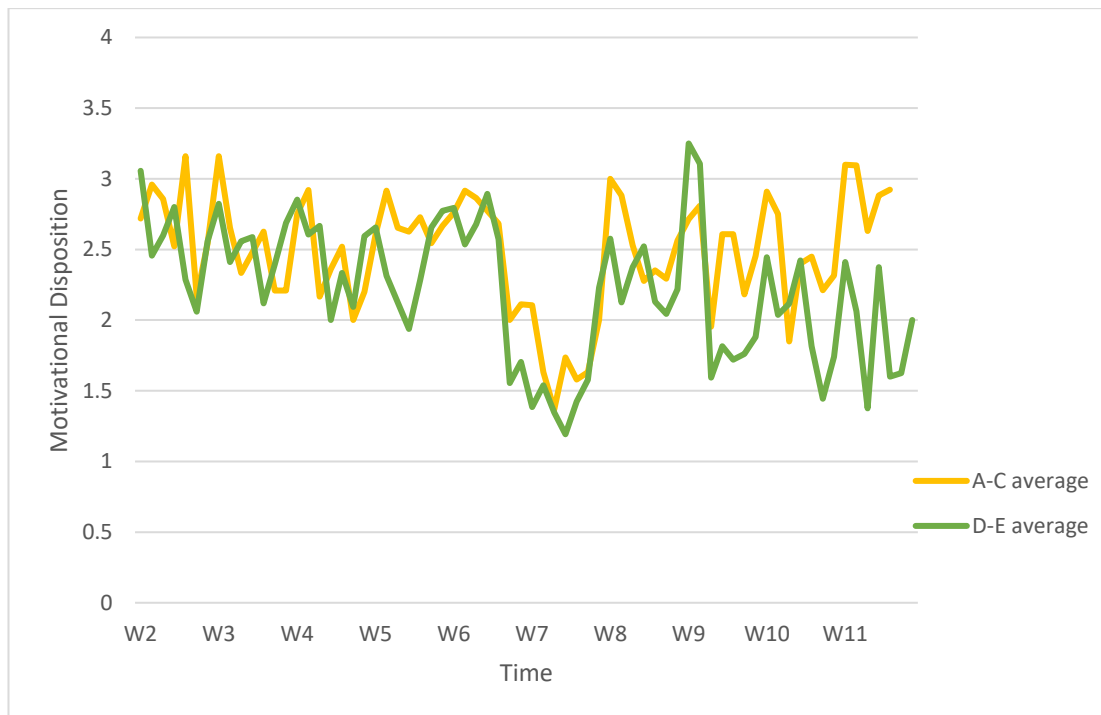
Figure 4.2 Average motivational disposition across ten weeks, organized by classes

For both groups, motivational disposition tended to peak on Mondays, lowering throughout the remainder of the week. Both groups also shared the same slump in motivation that occurred during week seven. After week nine, however, the standard level and advanced level classes began to differ more. Students in the standard level EAP course tended to report higher motivation levels to continue to study EAP later in the semester. This is likely because students in these classes still had upcoming assignment deadlines and exams, pointing to again the extrinsic and instrumental nature of their motivation. Students in advanced level classes reported having no EAP related assignments during these weeks as having a negative effect on their motivational disposition. The factors that accounted for students' changes in motivation will be discussed next.

Section 4.2.4 Factors Accounting for Changes in Motivation

In addition to selecting a motivation level for each day when completing the motivation journals, students also provided explanations as to why they selected a particular motivation level each day, as well as why their motivation changed over the course of a week. These explanations were explored by means of semi-structured face-to-face interviews and focus groups discussions. As mentioned previously in the methodology chapter, to assess what factors accounted for changes in EAP learners' motivation levels, the qualitative data from the journals, interviews, and focus groups were coded thematically and then organized according to patterns.

Both the enormous quantity of codes and the diversity of these codes suggest that students' motivation changed due to a plethora of factors internal and external to the EAP classroom, as well as factors internal and external to the language learner. In total 1244 thematic codes were created at the completion of the descriptive and pattern coding processes. The fact that students referred to motivational factors both internal and external to the language learner and the language learning classroom may account for why such a large number of codes were created during the coding processes. Table 4.3 displays the top 25 most frequently referenced thematic codes that relate to the journals and transcriptions of the interviews and focus groups.

Table 4.3 The top 25 most frequently referenced thematic codes (all students, journals, interviews, and focus groups)

Thematic Code	Number of References
1. Assignments, coursework, homework, projects	1118
2. Classes	508
3. Being or feeling – moods and emotions	430
4. Physical health	411
5. Time or days	307
6. Exams, tests, quizzes, assessments	297
7. Good desires	157

8.	Vacation and travel	149
9.	Busy	136
10.	Entertainment	96
11.	Friends	87
12.	Weather	85
13.	What students did (related to studying)	76
14.	Clubs	68
15.	Teachers and tutors	65
16.	Other things	65
17.	Pressure, stress, weight	61
18.	Feedback	60
19.	Lack of desire or negative desire	60
20.	Having no class	49
21.	Holiday	47
22.	Marks	37
23.	Problems or bad things	36
24.	Something good happened	35
25.	Classmates	30

While the total number of references to the thematic codes listed above does not reveal if the phenomenon represented by the thematic code had a positive or negative effect on students' motivation, the total number of references does give an indication as to what factors were frequently used by students to explain why they had a particular motivation level each day and why their motivation level changed over the course of a week. The total number of references therefore helps us to understand what factors played a role in shaping their motivational disposition.

With 1118 total references, the most frequently referenced topic in all the qualitative data was the assignments students were asked to complete. The code *assignments, coursework, homework, projects* is, however, a parent code that is comprised of a diverse array of 98 daughter codes. Examples of daughter codes include items such as deadlines (a deadline is approaching, having a lot of deadlines, getting a new deadline), the type of assignment (an essay, project, or readings), the difficulty of the assignment, making significant progress on the assignment, needing to redo an assignment or project, and not understanding how to complete an assignment to

name a few. Students frequently mentioned assignments related to EAP classes, as well as assignments of other classes.

Other frequently referenced thematic codes that relate with the educational context of students' classes included #2 *classes* (508 references), #6 *exams, tests, quizzes and assessments* (297), #15 *teachers and tutors* (65), #18 *feedback* (60) #20 *having no class* (49), #22 *marks* (37), and #25 *classmates* (30). Like the code *assignments, coursework, homework, projects,* the above codes relate to students' EAP classes as well as their other university classes.

While students frequently ascribed their motivation levels to factors associated with university classroom environments, they also attributed their motivation levels to factors external to these environments, as well as to factors internal to the language learner. The second and third most frequently referenced topics, *being or feeling – moods and emotions* (430 references) and *physical health* (411), suggest the importance of students' emotional and physical well-being. The fact that students wrote about these two topics, as well as *entertainment* (96), *friends* (87) and the *weather* (85), more frequently than they did of their *teachers and tutors* (65) suggests the importance of the impact that factors external to the classroom and factors internal to the language learner have on students' motivational disposition to study EAP on any given day.

To present an accurate picture of how an individual student's motivational disposition changed over time, as well as what factors were behind such changes, cases of specific individuals must be considered. Compare the average motivational

disposition level of students (see Figure 4.1 above) with Figure 4.3 below, which

shows the change of motivational disposition of an advance level student, Jack

(pseudonym, D1). The average motivational disposition in Figure 4.1 above can

mislead the reader into thinking that motivation levels were fairly stable in the

motivated range (*2 – slightly motivated, 3 – fairly motivated,* and *4 – very motivated).*
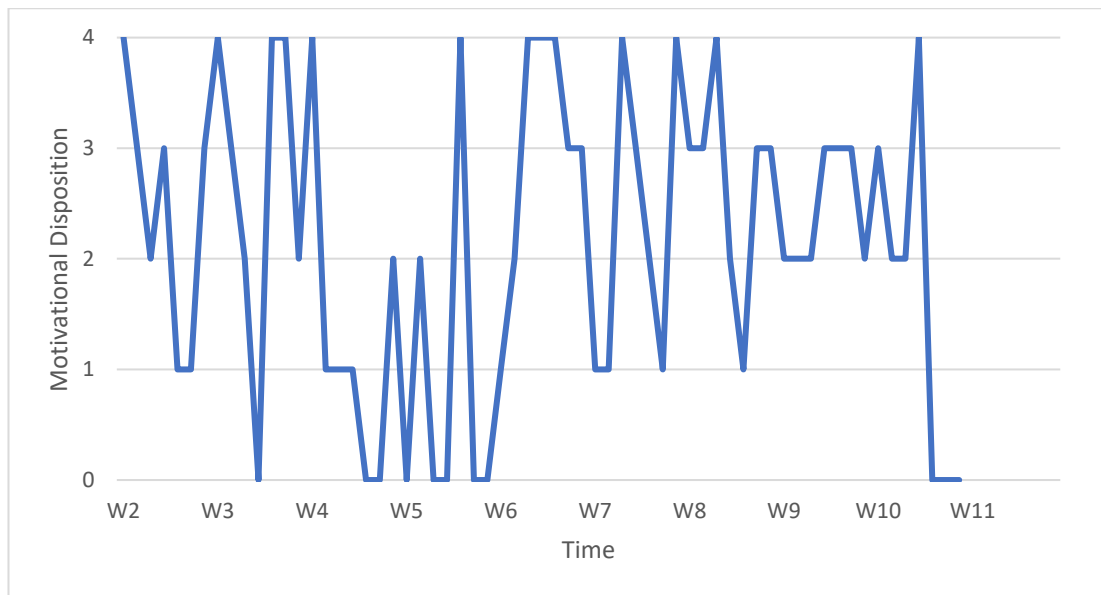
Figure 4.3 Motivational disposition of advanced level student, Jack (D1)

However, Jack's motivational disposition was much more volatile than the average.

He had periods of time where his motivation was quite high (weeks six and seven),

and also periods of time where his motivation tended to be quite low (weeks four and

five). Even within these periods, the student's motivation sometimes changed

drastically from one day to the next. For example, in week five, this student assessed

his motivation levels from being very demotivated, to very motivated, to very

demotivated, all within the span of three days.

In order to help the reader gain a more complete understanding of how individual

EAP learners' motivation changed over time and what factors accounted for these

changes, the following sections present five individual case studies of EAP students that participated in the study. After presenting these five case studies a CDST model that accounts for the dynamics of motivational disposition of EAP learners will be given.

Section 4.2.5 Student D1 (Jack)

Jack was an 18-year-old male Chinese student majoring in Architecture. In his first semester of study the student was placed in EAP021: Introduction to EAP, a course in the advanced pathway for first-year, first-semester students. During the time of the study in semester two, he was enrolled in EAP022: Advanced English for Analytical Writing. In regards to his English proficiency, this means that the student, at the time of the study, was at the Upper-Intermediate level (B2) of the Common European Framework of Reference (CEFR). Jack regularly participated in the research study, he completed both motivation questionnaires, nine weeks of the motivation journal, participated in an interview in week seven, and the first focus group discussion.

In completing the first motivation questionnaire early in semester two, during week two, Jack explained that he had at times in middle school, high school, and university, experienced demotivation in his studying of English. Teachers finding fault with him and other students were cited as the reasons for becoming demotivated in middle school. Demotivation in high school was attributed to the "stupid assessment system". In semester one of his university studies, the student experienced demotivation because of his EAP021 class being too hard or too easy at different points in the semester, as well as because of discouraging scores received

on some university coursework. Nevertheless, at the onset of semester two, he considered his motivation to study EAP to be "high".

Changes in the student's motivation constructs measured by the motivation questionnaires are given in Table 4.4. The data suggests that the motivation constructs of Jack were relatively stable, with minor increases in *Parental Encouragement / Family Influence* (1), *English Anxiety* (.6), *Instrumentality (promotion)* (.4), as well as a minor decrease in *Integrativeness* (-.4).

Table 4.4 Differences in motivation construct scores of student D1 (Jack)

Code	Motivation Construct	W2	W11	Difference
A	Intended Effort	4.4	4.2	-.2
B	Ideal L2 Self	4.833	5	.167
C	Instrumentality (promotion)	4.8	5.2	.4
D	Instrumentality (prevention)	3.667	3.5	-.167
E	Linguistic Self-confidence	5.25	5	-.25
F	Ethnocentrism	1.75	2	.25
G	Parental Encouragement / Family Influence	2.2	3.2	1
H	Attitudes towards learning English	4.667	4.667	0
I	Integrativeness	5	4.6	-.4
J	English Anxiety	2.2	2.8	.6

Despite the relatively stable nature of the Jack's motivation constructs, his motivational disposition was often volatile throughout the 10 weeks. This is evident from the self-assessed motivation levels recorded in the student's journal, which have already been presented and described above (Figure 4.3).

In addition to self-assessing their motivation levels to study EAP each day, students were also asked to provide a rationale for why they had selected a particular

motivation level, as well as to answer weekly reflection questions regarding why

their motivation changed over the week. Table 4.5, which lists the top five most

frequently referenced thematic codes for each week of Jack's motivation journal,

paints a picture as to what factors accounted for the changes in his motivational

dynamics. The student most frequently wrote about the need to complete

assignments and be prepared for classes and exams, as well as poor physical health

and lack of rest or sleep.

Table 4.5 Top five most frequently referenced codes for each week of Jack's (D1)
journal

Week Number	Top Five Most Frequently Referenced Codes
2	Assignments (6), classes (4, of which 3 were related to EAP), finishing an assignment (3), being or feeling – mood and emotion (3), desire to be prepared for class (3)
3	Classes (5, of which 4 were related to EAP), assignments (3), being or feeling – mood and emotion (2), The need to complete an assignment (2), receiving a good mark (2)
4	Assignments (5), physical health (4), rest and sleep (4), the need to complete an assignment (4), being or feeling – mood and emotion (3)
5	Assignments (8), physical health (7), rest and sleep (5), classes (4, of which 3 were related to architecture), heavy workload (3)
6	Assignments (5), finishing deadlines (3), exam is approaching (3), essay or paper (3), classes (2, architecture)
7	Assignments (3), exams (3), feedback (3), holiday (3), motivation journal interview (2)
8	Assignments (5), classes (4, of which 3 were related to EAP), desire to be prepared for class (2) deadline approaching (2), entertainment (2)
9	Assignments (6), essay or paper (4), classes (2, both related to EAP), no assignment (2), finishing an assignment (2)
10	Classes (6, of which 5 related to architecture), exams (3), assignments (2), physical health (1), demotivated (1)
11	0 – Student did not complete the motivation journal this week

Data from the interview with Jack in week seven provided further insight into how

these factors affected his motivation. The most obvious period of demotivation

occurred during weeks four and five. Due to illness and a heavy workload his

motivational disposition was quite low in these weeks. Jack held a leadership

position in a student club that prepared review materials for exams to help other

students. He chose to put little effort into studying EAP during these weeks because

of the need to complete the review material early enough for students to have time to benefit from it before their midterm exams in week seven. Jack also explained that completing assessments in his major classes (architecture) was more important than expending effort studying EAP. Only when these 'more important' objectives were completed was he willing to focus on his EAP assignments in week six.

External factors to the EAP classroom were attributed as the major reasons for his unwillingness to study EAP during weeks four and five. Factors internal to the EAP classroom and the learner, such as an EAP assignment deadline and feeling confident that the assignment was completed well, were attributed as having a positive influence on the Jack's motivation, lifting him out of the motivational slump. This opinion, that EAP class and its related assignments were important, but secondary to major classes or other responsibilities (in this case leading a club), was frequently expressed by other students as well.

When asked what were the things that demotivated him to study EAP the most, Jack cited, "physical workload" brought about by "disturbances from other work" such as other classes or extra-curricular activities, "mental sickness or mental discomfort", and "physical discomfort".

The student cited his responsibility as a leader in the club as the primary reason why he felt overwhelmed by his workload, "I have been in lead of the department of club so there is some work to do and much of the time I am occupied with this work and this cannot be… I cannot escape from it… I can't escape from my responsibility" (student D1, interview, week seven). He described his unwillingness to let others do

the work related to his club responsibilities as a "personality flaw". While his focus was on his club related responsibilities, the deadlines of assignments crept closer, and this was one factor that lead to the student experiencing "mental discomfort".

The "mental discomfort" which had a demotivating effect was ascribed to other factors as well. For example, dissatisfaction and negative feelings related to classes such as Chinese Culture Teaching (CCT), a class that teaches Chinese history, politics, law, and culture, and mathematics. In his mathematics class Jack felt that the homework was not challenging enough and that he had difficulty understanding the teacher's English (because of the teacher's English abilities, not his own). Another source of mental discomfort was having a feeling of loneliness and inferiority. The feeling of loneliness was attributed to a good friend opting to spend time with his girlfriend rather than studying with Jack. A feeling of inferiority stemmed from Jack comparing what he had learned and the academic progress he made to the progress of his high school friends who were studying at other universities that are top-tier universities in China.

Physical discomfort was explained as the discomfort caused from being physically ill. Jack expressed that he was unable to rank the major demotivating factors (workload, mental discomfort, and physical discomfort) in any particular order. To Jack, these factors were interconnected and influencing each other:

> I think that I cannot say that the first one is the workload and the second one is mental discomfort and the third one is physical discomfort. I cannot say the three things individually affect me and my motivation level. I will say it is a very mutual connection, a very mutual influence… this is a chain reaction - that is a negative chain reaction. (student D1, interview, week seven)

Jack viewed having a heavy workload and poor physical health as "two factors [that] can affect each other and make the opposite to be worse". Putting it another way he explained:

> Sickness will affect your efficiency of working and this can be... how to say that... how to say the bad effect that result in bad worse effects… that is a chain [reaction]… and this affects working efficiently... that will maybe make me stay up later in the night. (student D1, interview, week seven)

To clarify, Jack meant that a heavy workload resulted in the need to stay up late. Staying up late led to a decrease in the amount of sleep he was getting. This in turn compromised the student's immune system, resulting in Jack becoming ill. Unwilling to give up making progress in his club responsibilities and architecture assignments for the sake of getting more rest, Jack ended up needing to spend *more* time completing his responsibilities and assignments than he would have needed to, should he have been in a better physical condition. The additional time he spent on these activities was not efficient because of his deteriorating physical health.

The downward spiral caused by these two factors (heavy workload and physical discomfort or illness) was exacerbated by the student's "mental discomfort", dissatisfaction with his progress, and a "personality flaw" of not letting others share in the completion of the club work:

> So because of that discomfort... because I want to avoid discomfort... I will do a lot of work and this will lead to heavy workload... and heavy workload will result in the physical discomfort… I think there is a connection. (student D1, interview, week seven)

This pattern that lead to a lack of motivation to study EAP continued until Jack's club activities and architecture assignments were completed. Only after this was the student willing to get the rest needed in order to recover from his illness and focus on his EAP assignment.

Jack identified the following as major motivators: EAP classmates, a sense of accomplishment and personal development brought about from learning in EAP class and completing EAP assignments, "irrelevant" factors such as getting a new computer and new cell phone, and recognition of hard work and success from parents. EAP classmates were motivating because the student felt he improved his English skills by communicating with them and because there was a sense of camaraderie that allowed for interesting discussions to be held in class:

> My classmates have a lot more better…no… much better English skills than me and when you communicate, when you say English with them you will get your English to a higher level. And another is maybe all the EAP022 students who come from previous EAP021 classes… maybe we have many mutual topics and mutual things to like and to dislike, and this can be very interesting topic to talk about inside the EAP class. (student D1, interview, week seven)

The student cited a sense of accomplishment and personal development brought about from learning in EAP class and completing EAP assignments as the second major motivator: "When you do your research paper that is a brand new vision a brand new field of your life and this kind, maybe kind of doing your research, you are an expert like this, and this is a very good feeling".

In addition, Jack identified things he considered "irrelevant" to EAP class to affect his motivation in a positive manner. The examples given were getting a new

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computer and cell phone. When the interviewer probed more deeply, asking why a new computer or cell phone would lead to an increase in motivation to study EAP, as these things appear to be unrelated, the student explained that getting a new computer and phone led to an overall increase in his motivation to study, and that naturally led to an increase in motivation to study EAP because "EAP is one motivation level of all motivation levels" (student D1, interview, week seven). Upon further reflection, the student attributed the increase in all motivation levels to the fact that his parents purchased the computer and phone for him, to recognize his good grades and achievements in the previous semester. This may be the reason why there was a slight increase (1) in the student's motivation construct of *Parental encouragement / family influence.*

> *Student:* I think I am doing a very good job with last semester that can be revealed in my grades... so maybe that is a... that is the traditional logic of Chinese parents… that if you are doing a good job you will get a complement. And that is maybe something that I am pursuing for... I am in need of. The fact that… my parents are…. how to say that…
> *Interviewer:* Acknowledging your success? Recognizing your success?
> *Student:* Yeah, recognizing my grades, yeah my achievements.
> (student D1, interview, week seven)

An interesting note is that the student's motivational disposition was affected by his engagement in the research. In his journal he wrote:

> I had a talk with [the interviewer] on the factors influencing my motivation and the relationship between them. I systematically went through the factors and became more aware of my current situation. (student D1, motivation journal, week seven, Wednesday)

By reflecting on his motivation in the journal and in the interview, the student received a boost in his motivation to study EAP for a short period of time (his

motivational went up three points from the previous day to the highest level, *4 - very motivated*). It is worth noting that many other students also cited participating in the research and reflecting on their motivation levels as being beneficial to their motivation. There seemed to be two reasons for this. The first is the metacognition that students developed through reflective practice and the completion of their motivation journals; students were recognizing periods of time where their motivation to study EAP was low and this awareness led to an increase in desire to improve and work harder. Second, when students discussed their reflections with the researcher in interviews, they felt a sense of accomplishment at having successfully analysed and explained their experience to a native speaker.

To summarize, Jack was a high achieving student who focused on assignments, exams, architecture classes, and club leadership responsibilities. He actively participated in the research. His motivational disposition changed frequently throughout the semester, with factors external to the EAP classroom acting as major demotivators. These included having a heavy workload related to club activities and architecture assignments, experiencing "mental discomfort" or negative emotions that resulted from a "personality flaw" and feelings of loneliness and inadequacy, and lastly, physical discomfort from being ill. Increases in motivation were primarily associated with factors internal to the EAP classroom, such as classmates, assignments, the teacher, and a sense of accomplishment and personal-development stemming from completing original research. Parental encouragement was also a major motivator.

Section 4.2.6 Student A7 (James)

James was an 18-year-old male Chinese student majoring in Urban Planning and Development. In his first semester of study the student was placed in EAP023: Introduction to EAP, a course in the foundation pathway for students in the first semester of their first year. During the time of the research study in semester two, he was enrolled in EAP030: English for Academic Purposes for Built Environment 1. In regard to English proficiency this means that James was at the Intermediate level (B1) of the CEFR. He regularly participated in the research study; he completed both motivation questionnaires, 10 weeks of the motivation journal, participated in an interview in week 10, and participated in the second focus group.

James had experienced demotivation to study English all throughout his education, from elementary school to university. He cited not recognizing the importance of English and having low self-confidence in English as reasons why he was demotivated in his studies of English in elementary and middle school. Low self-confidence was given as the reason for being demotivated in high school and university. At the onset of semester two, however, he considered his motivation to study EAP to be "high".

Changes in his means of motivation constructs measured by the motivation questionnaires are given in Table 4.6. The data suggest that the majority of his motivation constructs were stable. There was, however, a noticeable decrease in *English anxiety* (-1.8), suggesting that the student became less anxious about using English in EAP class and with others in the academic context as the semester

progressed. There were also minor decreases in *Attitudes towards learning English* (-1) and *Integrativeness* (-.4).

Table 4.6 Differences in motivation construct scores of student A7 (James)

Code	Motivation Construct	W2	W11	Difference
A	Intended Effort	3.4	3.4	0
B	Ideal L2 Self	5.333	5.333	0
C	Instrumentality (promotion)	4.6	4.4	-.2
D	Instrumentality (prevention)	4	4.167	.167
E	Linguistic Self-confidence	4.5	4.25	-.25
F	Ethnocentrism	2	2	0
G	Parental Encouragement / Family Influence	3.4	3.6	.2
H	Attitudes towards learning English	4.333	3.333	-1
I	Integrativeness	4.6	4.2	-.4
J	English Anxiety	4.6	2.8	-1.8

Data from the journal revealed that over the 10 weeks James's motivational disposition frequently bounced between being *3 – fairly motivated* to *0 – very demotivated* (see Figure 4.4). His motivation was highest during weeks five and eleven; it was lowest in weeks four and seven.
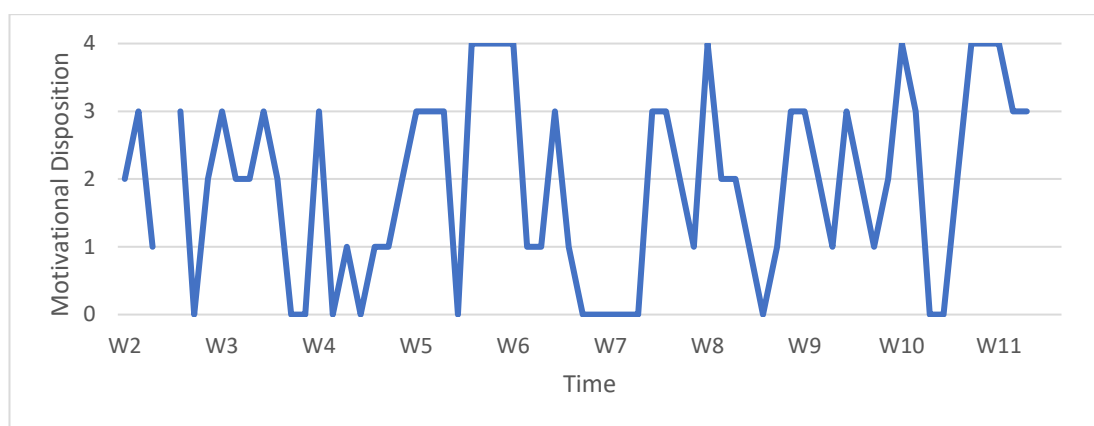
Figure 4.4 Motivational disposition of standard level student A7 (James)

Table 4.7, which lists the top five most frequently referenced thematic codes for each week of his journal, provides insights into what factors accounted for James's motivational dynamics during these weeks. Motivation was low in week four because of poor health and the need to rest. The student wrote about this in his weekly reflection: "Such an awful week. I lie in my bed almost every day, because of the bad cold" (student A7, motivation journal, week 4, weekly reflection one). James had no motivation to study at the end of week six and the beginning of week seven because he spent the time traveling with family (week seven is a reading week and there are no EAP classes or exams during this week).

Table 4.7 Top five most frequently referenced codes for each week of James's (D1) journal

Week Number	Top Five Most Frequently Referenced Codes
2	Clubs activities (1), having good desires (1), having a plan (1), academic goals (1), this research study (1)
3	Desire to learn (1), being or feeling – mood and emotion (1), sense of responsibility (1), weather (1), learned nothing (1)
4	Rest and sleep (3), physical health (2), sad (2), this research study (1), bad week (1)
5	Desire to improve (1), deadlines (1), thinking about life and self (1), new start (1), working hard (1)
6	Assignments (2), seeing a positive example (2), deadline (1), looking forward to holiday (1), no time to study EAP (1)
7	Vacation and travel (3), assignments (1), being or feeling – mood and emotion (1), relaxing too long (1), shopping (1)
8	No class (2), assignments (2), deadlines (2), nothing special or exciting (1), games (1)
9	Assignments (2), deadlines (2), preparing for presentation, (2)working hard (1), cannot maintain motivation (1)
10	Exams (4), need to work harder (1), prepare for presentation (1), need to review (1), weekend (1)
11	Exams (4), prepare for presentation (1), getting up late (1)

As to periods of motivation, James had an EAP assignment due on Monday of week six, which accounts for why the student was fairly/very motivated for the majority of week five. In week 10 and 11, James was fairly/very motivated because of his desire to do well on an approaching EAP exam. Throughout the semester, having support

from family and having examples of how to study diligently served as motivational boons for James.

The data from the interview helps elucidate the interplay of these contextual factors and their influence on the James's motivational disposition to study EAP. As the interview was held in week 10, the student was able to reflect on nine weeks of language learning. According to James, each week's motivation levels were different and there were no patterns to his motivation from week to week. He explained that his motivation level was changing all the time because it was affected by a diverse array of factors. He felt that if he had had a long-term plan, clear goal or purpose, then his motivation levels would have been higher and more stable:

> *Interviewer:* when you think about the past nine weeks, do you think there is a pattern to your motivation? Like each week is the same or do you think it's different all the time?
> *Student:* Different all the time… always changing. I think [it's] because I don't have long term plan and a clear purpose… I think the most important thing just is goal... no clear goal... because to be honest I think I'm not [working] as hard as before [for the] Gaokao (the Chinese university entrance exam) [in] grade three in senior school… a clear goal can motivate me.
> *Interviewer:* So if you don't have a clear goal it's hard to be motivated.
> *Student:* If you have a clear goal and you continue to work on it and the other reasons can't affect you and uh... so... all of the reason can affect you now... affect me now... it can explain because I don't have a clear goal.
> *Interviewer:* So if you have a clear goal you are less likely to be affected by other factors?
> *Student:* Yes.
> *Interviewer:* If you don't have a goal then you are more likely to be affected by other things?
> *Student:* Yeah.
> (student A7, interview, week 10)

Other factors that affected James negatively because of the absence of having a clear goal included his mood, being lazy, other people around him that did not want to

study (e.g. roommates), and playing games. The student felt that classmates, although they were around him, did not influence his motivation as he did not know them well.

In regard to significant motivators to study EAP, James felt that if he had had a clear goal, that this would be a major motivator. He cited others, such as two of his cousins, as examples of people who motivated him because of their diligence in studying and their ability to speak English well. He had a desire to become someone capable of using English fluently and traveling the world:

> *Student:* Sometimes when I visit the website there is some video. I remember I used to see some people record a video that they travel abroad. And when I saw they are very young and very cool, they can speak English as fluently as the native speaker, I think it's very cool and I like to have a life like that.
> *Interviewer*: So you see some models, you see people who are a good model for you for their ability to speak English. You admire them, you would like to do that too?
> *Student:* Yes, that's the life I think I would like to have. When I saw that I will be motivated.
> (student A7, interview, week 10)

This seems to coincide with James's high *Ideal L2 Self* score (5.333) from the motivational questionnaires given in weeks two and 11. Being able to envision using English in real contexts in the future led to an increase in James's motivation to study English now.

Factors outside of EAP class appeared to have played a more prominent role in his motivational dynamics than factors inside the EAP classroom. James felt that at XJTLU the burden to decide when and where to study primarily fell on himself, as teachers and university administrators do not always stipulate when, where, and what

to study, as many other universities and secondary schools in China do. As the student put it:

> I can't control myself so I need other people to control me… because this is university you need to select your choice to yourself... so the class or school.... the class is just a place to if you want to learn... it's a place to learn. But if you don't have... if you don't want to learn... it can't affect you a lot. Most of them [factors affecting motivation to study EAP] is outside and in other words it's yourself. But the teacher the deadline also can affect you (student A7, interview, week 10).

The comment above, along with similar comments made by other students, suggest that some Chinese freshmen students experience a sort of educational culture shock where they struggle with the expectation that they are to be independent learners capable of enacting good study habits without explicitly being told what to do and when to do it.

To summarize the factors that affected James's motivational dynamics, James felt that due to not having a specific goal or plan for studying EAP, a diverse array of factors outside the EAP classroom negatively affected his motivational disposition to study. He was affected by those around him in both positive and negative ways; good role models and family members inspired him to work harder, while roommates and friends who were not studying caused him to relax more in his studies. Having a lack of self-discipline, the student was reliant on others to "limit" what he should or should not do; this proved detrimental to his studies as he shifted from a Chinese high school to a TNE HEI that adopts a more British style of education where the onus is on the student to make decisions in regards to his or her study practices.

Section 4.2.7 Student B3 (Susan)

Susan was a 19-year-old female Chinese student majoring in Architecture. In her first semester of study she was placed in EAP021: Introduction to EAP, a course in the advanced pathway for students in the first semester of their first year. In semester two, like James, she was enrolled in EAP030: English for Academic Purposes for Built Environment 1. While originally placed in an advanced EAP course in semester one, Susan did not achieve high enough marks to be enrolled in an advanced EAP course in semester two, having missed the benchmark by a single point. This means that Susan's English proficiency was very near the CEFR Upper-Intermediate level (B2). The student regularly participated in the research study; she completed both motivation questionnaires, 10 weeks of the motivation journal, and participated in an interview in week 10. She did not participate in any focus groups discussions.

Susan reported having no experience of demotivation to study English throughout her education, except for at university. She cited having to drop from the advanced pathway to the standard pathway in her EAP courses as being discouraging. At the beginning of semester two, however, she still considered her motivation to study EAP to be "high".

Table 4.8 shows the changes in Susan's motivation constructs. *Attitudes towards learning English* increased by 1, as well did *English anxiety*. *Parental encouragement / family influence* increased by a minor amount (.4). There were minor decreases in *Instrumentality (promotion)* (-.6), *Instrumentality (prevention)* (-.5), and *Integrativeness* (-.4).

Table 4.8 Differences in means of motivation constructs of student B3 (Susan)

Code	Motivation Construct	W2	W11	Difference
A	Intended Effort	4.2	4.4	.2
B	Ideal L2 Self	4.833	5	.167
C	Instrumentality (promotion)	5.2	4.6	-.6
D	Instrumentality (prevention)	5.167	4.667	-.5
E	Linguistic Self-confidence	5.25	5	-.25
F	Ethnocentrism	3.25	3	-.25
G	Parental Encouragement / Family Influence	3	3.4	.4
H	Attitudes towards learning English	4	5	1
I	Integrativeness	4.6	4.2	-.4
J	English Anxiety	3.4	4.4	1

Data from Susan's journal suggest that over the ten weeks her motivational disposition was for the most part in the motivated range (*4 – very motivated* to *2 – slightly motivated)* (see Figure 4.5). On a few occasions, in week four and nine, her motivational disposition dropped to *1 – fairly demotivated*; the student never assessed her motivational disposition to be *0 – very demotivated*. Her motivation was highest in weeks five and six.
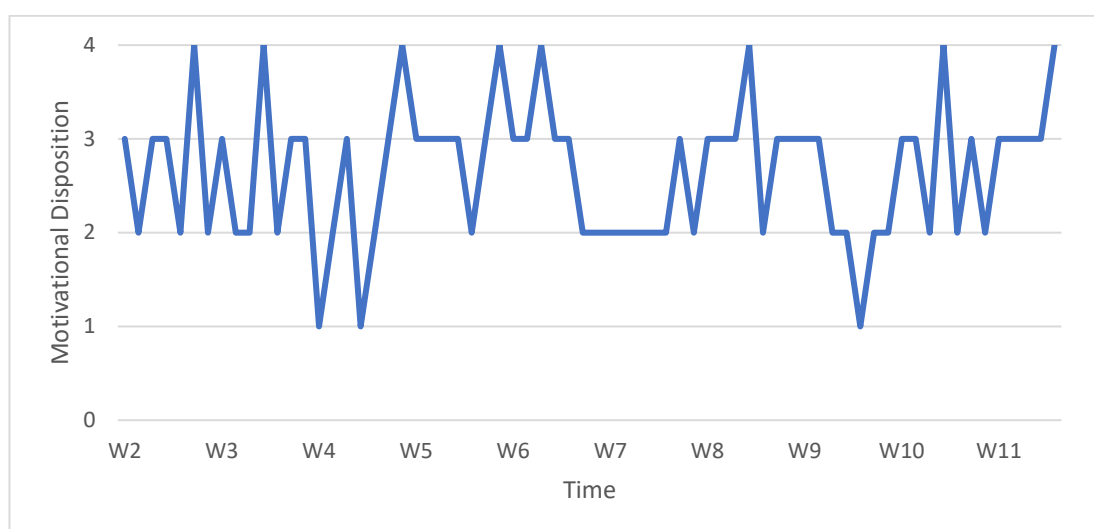
Figure 4.5 Motivational disposition of standard level student B3 (Susan)

Table 4.9, which displays the top five most frequently referenced thematic codes for each week of Susan's journal, sheds light on what factors accounted for her motivational dynamics during these weeks. The data suggest Susan aimed to excel in her studies, with assignments, presentations, classes, teachers, preparing for the IELTS exam, and other examinations as major motivating factors. The factors attributed to demotivated motivational dispositions include becoming ill, something bad happening to a famous singer she admired, and staying up late completing a "frustrating assignment" for a non-EAP class. The weather was frequently mentioned as affecting her motivation in both positive and negative ways.

Table 4.9 Top five most frequently referenced codes for each week of Susan's (B3) journal

Week Number	Top Five Most Frequently Referenced Codes
2	Assignments (6), weather (2), rest and sleep (2), classes (2, of which one related to EAP), friends (1)
3	Assignments (4), rest and sleep (1), marks (1), weather (1), IELTS (1)
4	Weather (3), IELTS (2), physical health (2), rest and sleep (1), something bad happened (2)
5	Assignments (4), deadline (2), teacher (1), feedback (1), IELTS (1)
6	Assignments (3), IELTS (3), exams (2), weather (1), fun class (1)
7	No class (4), IELTS (1), don't want to work (1), no assignment (1)
8	Assignments (5), teacher (3), feedback (1), IELTS (1), stressed (1)
9	Assignments (3), stay up late (3) classes (2, of which one related to EAP), weather (1)
10	Assignments (3), Architecture (3), preparing for presentation (2), motivation journal (1), interview (1)
11	Prepare for presentation (4), IELTS (1)

In her interview in week ten, Susan explained that there was a weekly trend in her motivational disposition. Frequently on Friday she would have architecture assignments due; on Thursday evenings she would stay up late completing the assignments. On Friday, Susan had an early morning EAP class, and due to her staying up late the previous night, her motivation to study EAP was lower than on

other days. In addition to this, the student cited the weather as having a major impact

on her mood, which then impacted her motivation:

> *Interviewer:* Can you think of two other things that demotivate you?
> *Student:* Uh maybe the weather? I hate rainy days. So when it's in... in the
>   beginning of the semester it was always rain.
> *Interviewer:* It was raining a lot wasn't it.
> *Student:* Yes... but it's not only for EAP... I feel demotivated for all my class
>   when it's in rainy days.
> *Interviewer:* Can you maybe think about the connection there... why do you
>   think when it's raining that that affects you in a negative way?
> *Student:* Maybe in rainy days I prefer to stay in library by myself... maybe
>   I'm not in a mood to talk with others… I'm not sure about the
>   reason… if it's sunny... I think I am will be cheered up.

The last source of demotivation Susan identified was the fact that because the

student barely missed the required benchmark score of 70 to continue studying in an

advanced EAP course, she was required to study in a standard pathway EAP course:

> In last semester I was in the high level pathway... the advanced level
> pathway... but in the final exam I didn't reach 70, I got 69. So I failed to keep
> the advanced level. I have to go to [EAP]030... so I was very depressed at the
> beginning of the semester. (student B3, interview, week 10)

In regard to motivators Susan explained how the teacher played a pivotal role in

helping her get out of the initial slump by being friendly, discussing the issue, and

giving attention to the student:

> I also talked with [my teacher]... and I think she really helped me a lot... I
> think my motivation... I think it kind of increased after two or three weeks…
> because in the first block I found that content is kind of similar to what I
> learned last semester so I'm afraid that the total content is similar… [My
> teacher] told me later it will be different and she likes talk to me in the class...
> so I think I'm motivated. (student B3, interview, week 10)

When asked for more examples of factors that motivate her to study EAP Susan cited

two more examples related to teachers: first, the student found it highly motivating

when she received positive feedback from her teacher; second, she had a very

positive experience learning from her EAP teacher in the previous semester.

While Susan viewed EAP as being important, she recognized outside factors, such as

friends, as having a noteworthy effect on her mood and motivational disposition:

> *Interviewer:* Think about things that affect your motivation to study EAP...
> and things that demotivate you... do you think most of those things
> happen inside the EAP class or outside the EAP class?
> *Student:* Outside, mostly. When I was in EAP class I feel good. I think a lot
> of friends around me they are ... they not like EAP class and they are
> unwilling to go to class. I think it's strange, and sometimes, for
> example I stay up late yesterday and they may say "ok it's ok not to
> attend the class today".
> *Interviewer:* Do you think those other students affect your motivation to
> study EAP?
> *Student:* Yes, they may affect, but I always go to class... but the mood will be
> different.
> (student B3, interview, week 10)

To be brief, Susan's motivational disposition was relatively stable and positive

throughout the ten weeks. Reasons for this include her desire to perform well on

assignments, presentations, and exams, as well as receiving attention and support

from her EAP teachers. Despite viewing EAP as being important, there were several

factors outside of the EAP class that negatively affected her motivational disposition

to study EAP. These included friends, the weather, and feeling tired from staying up

late working on assignments for her architecture class.

Section 4.2.8 Student E17 (Emily)

Emily was an 18-year-old female Chinese student majoring in Urban Planning and Development. In her first semester of study she was placed in EAP021: Introduction to EAP, a course in the advanced pathway for freshmen students. In semester two she was enrolled in EAP022: Advanced English for Analytical Writing. Her English proficiency was on par with the CEFR Upper-Intermediate level (B2). Emily completed both motivation questionnaires, three weeks of the motivation journal, and participated in an interview in week 10.

Emily reported having experienced demotivation to study English in the first semester of her university studies. This was because she felt her English abilities were above most students', she had limited time available to study English, and she lacked self-discipline. At the onset of semester two, however, she considered her motivation to study EAP to be "high".

Changes in Emily's motivation constructs as measured by the motivation questionnaires are given in Table 4.10. The data suggest that the student's motivation constructs were less stable than other students. The largest changes occurred in *Integrativeness* (-1.8) and *English anxiety* (1), suggesting the student had less of a desire to integrate into possible academic or professional communities that use EAP, and that she became more anxious in her English abilities as the semester progressed. Perhaps related to this is a decline in her linguistic *self-confidence* (-.75) and *Intended effort* (-.8). Her *Attitudes towards learning English* also declined (-.333), as well did her score for *Ideal L2 self* (-.334).

Table 4.10 Differences in motivation construct scores of student E17 (Emily)

Code	Motivation Construct	W2	W11	Difference
A	Intended Effort	4.2	3.4	-.8
B	Ideal L2 Self	5.167	4.833	-.334
C	Instrumentality (promotion)	4.2	4.6	.4
D	Instrumentality (prevention)	3.333	3.167	.167
E	Linguistic Self-confidence	5.5	4.75	-.75
F	Ethnocentrism	2	1.75	-.25
G	Parental Encouragement / Family Influence	2	2.8	.8
H	Attitudes towards learning English	4.333	4	-.333
I	Integrativeness	4.6	2.8	-1.8
J	English Anxiety	1.8	2.8	1

These negative trends in her motivation to study EAP are perhaps reflected in the data from her motivation journal, as she only completed three out of 10 weeks. During these three weeks Emily's motivational disposition fluctuated between *4 – very motivated* and *1- fairly demotivated* (see Figure 4.6).
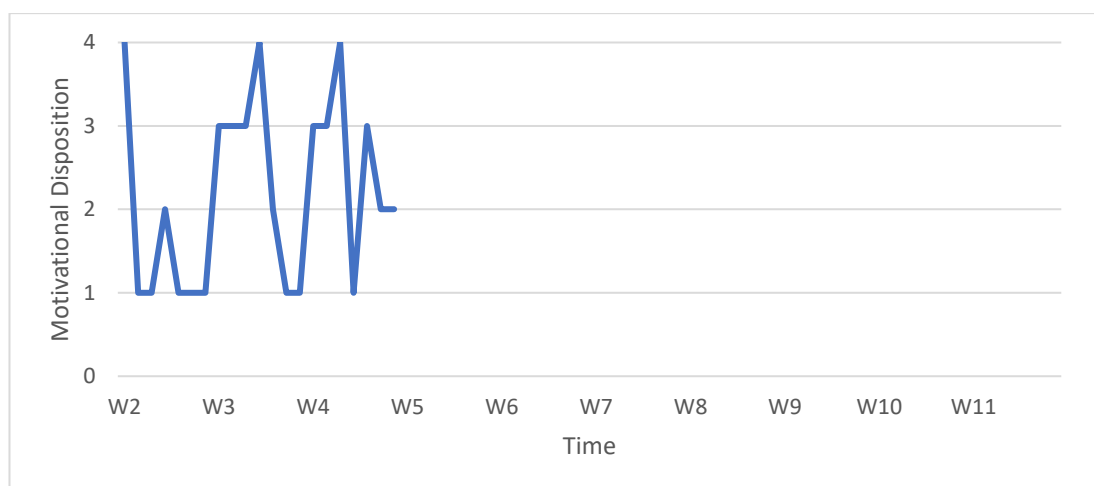
Figure 4.6 Motivational disposition of advanced level student E17 (Emily)

Table 4.11 lists the top five most frequently referenced thematic codes for each of the three weeks of Emily's journal. They provide insights into what factors accounted for her motivational dynamics during these initial three weeks. In week two, her

motivation dropped from *4 – very motivated* to *1 – fairly demotivated* due to having

no free time and feeling very tired. Having no free time was also frequently cited in

the remaining weeks. Having good weather, a good mood, and free time were three

factors that provided a motivational boon during these weeks.

Table 4.11 Top five most frequently referenced codes for each week of Emily's
(E17) journal

Week Number	Top Five Most Frequently Referenced Codes
2	Classes (2, of which both related to EAP), tired (2), no free time (1), not prepared (1), hanging out (1)
3	No free time (3), good weather (2), have free time (2), being or feeling – mood and emotion (2), tired (1)
4	Normal day (2), being or feeling – mood and emotion (2), have free time (1), no free time (1), good weather (1)

In her interview Emily explained that her mood was both a significant demotivating

and motivating factor and that the weather played a significant role in influencing her

mood:

> *Student:* It's like I'm quite emotional that um maybe I feel happy today then I
> love to embrace everything. And I'm just discouraged or I'm a little
> blue... maybe I don't want to do anything.
> *Interviewer:* So could you tell me somethings that maybe affect your mood?
> *Student:* The weather. And uh…
> *Interviewer:* What kind of weather puts you in a mood where you are not
> very interested or willing to study EAP?
> *Student:* Uh like um... rainy [weather]...
> *Interviewer:* Yeah, we got a lot of that this semester, didn't we?
> *Student:* Yeah and we are going to have a lot of it in the last month… so
> discouraging.
> *Interviewer:* Ok, so weather is a big factor for you, it influences your mood,
> it's discouraging.
> *Student:* I love the sun.
> *Interviewer:* So if the weather is good, its sunny... it puts you in a mood that...
> *Student:* A huge percent...
> (student E17, interview, week 10)

In addition to the weather, a series of negative events and having negative interactions with others affected Emily's mood. This contributed to her struggles with depression, which in turn affected her motivational disposition to be around others or to study EAP:

> *Interviewer:* Ok, what else besides weather? What else influences your mood?
> *Student:* Maybe if I meet somebody that he or she discourage me, I may feel a little depressed for a little time. And um... if a ton of things happen in line, just one after one... discourage me... it's bad…it is like angry at the first time, and later the world abandon me... and I'm depressed... I'm depressed... I don't want to be with anyone anymore, I don't want to do anything anymore... I want to die. I don't care…
> *Interviewer:* That seems like a bad chain, that can be hard. Is it?
> *Student:* I just get used to it.
> (student E17, interview, week 10)

The negative experiences that Emily referred to were experiences outside of EAP class. She therefore felt that factors outside the EAP class played a more important role in shaping her motivational disposition than factors internal to the EAP classroom did. While she did not explicitly state so, the depression experienced by the student may have contributed to her only completing three weeks of the motivational journal.

In addition to citing negative moods and emotions as affecting her desire to study EAP, Emily cited being busy with club and other social activities as being more attractive options than attending EAP class or studying EAP. In part this was because she felt confident in her ability to succeed in EAP, even if she was relaxed in her studies and was not that motivated:

Of course EAP does matter, but umm, I think whether I'm motivated [or not]
I can do it good. So, I don't quite think about that. I'm blind confident
[laughs]. (student E17, interview, week 10)

When asked to identify motivators for studying EAP, Emily quickly cited having a

positive mood as being an important factor for providing the motivation to interact

with others, including attending EAP class:

> *Interviewer:* What are the things that do motivate you to study EAP?
> *Student:* Um if I'm happy today... I dress myself beautifully... and I want to
> go to anywhere... I'm' flexing and saucing. And do motivate me ...
> uh maybe I think [the teacher] is cute... and I go to EAP [giggles].
> *Interviewer:* Ok so, I understood two things, one if you are in a good mood…
> *Student:* Yeah.
> *Interviewer:* You are willing to go out, and if you dress up and make yourself
> pretty… does that make you in a good mood?
> *Student:* Yeah... so I think it's mood. It's mood.
> *Interviewer:* So that helps you get in a good mood and you're more willing to
> go out and go to class. And then if [the teacher] is cute and...
> *Student:* [The teacher] and my group members... I love them so... sometimes I
> love them... I love to go to EAP.
> (student E17, interview, week 10)

Some readers might not understand "flexing and saucing" as used by the student in

the previous quote. Flexing, in this context means to show off one's valuables

("Flex," n.d.). Saucing means to be well-dressed, fashionable, and have "a style,

confidence and attraction about them" ("Sauce," n.d.).

In addition to having a good mood and liking her teacher and group members, Emily

often attended class because she did not want to miss information regarding

assignments and exams; she felt "pressure" to get good grades even if she did not

care very much for EAP as a subject:

> *Student:* The third [motivator] is if something important is going to be announced, like how to do our coursework... I like to go.
> *Interviewer:* So if you know that what is going to be discussed is something related to your coursework or… when you say something is important is announced... is that...?
> *Student:* It's like related to my score.
> *Interviewer:* So if they are talking about the exam or something like that then you want to go and see what that information is.
> *Student:* Yeah, [see] what happened… Maybe we talk about the mood and bad things happen, we can call them emotion. It's like something internal. And uh, and if I having exam or coursework maybe we can all call them pressure.
> (student E17, interview, week 10)

In summary, Emily was an advanced level student whose motivational disposition was heavily affected by her mood. Poor weather, as well as negative interactions and experiences with others outside the EAP class, contributed to negative moods and even depression. Being confident she could perform well on assignments and exams without having to attend class or study, the student often preferred to engage in club or other social activities. Major motivators to attend class included having a positive mood, having good groupmates and a good teacher, as well as the need to learn important information regarding coursework and exams that would affect her final grade.

Section 4.2.9 Student C6 (Katerina)

Katerina was a 19-year-old female Chinese student majoring in Architectural Engineering. In her first semester of study she was placed in EAP023: Introduction to EAP, a course in the standard pathway. During the time of the research study in semester two, she was enrolled in EAP030: English for Academic Purposes for Built Environment 1. This means that her English proficiency level was at the CEFR Intermediate level (B1). She completed one of two motivation questionnaires, five weeks of the motivation journal, and participated in an interview in week 10.

Katerina reported being demotivated to study English in middle school due to finding it difficult to learn and remember new words. She also reported being demotivated in the first semester of university because she did not enjoy participating in discussions and delivering presentations. She considered her motivation to study EAP to be "so-so" at the beginning of semester two at university.

As Katerina did not complete the first motivation questionnaire it is not possible to calculate changes in her motivation construct scores. However, the scores of her motivation constructs from the second motivation questionnaire (see Table 4.12) do provide insights into the motivational profile of the student towards the end of the second semester. Katerina's *Intended effort* (2.2) and *Instrumentality (promotion)* (2.4), *Parental encouragement / family influence* (1), and *Attitudes towards learning English* (1) scores were the lowest of any student. Her *Ideal L2 self* score (3.5) was the second lowest, and her *Linguistic self-confidence* (3.5) was the third lowest. The data suggest that Katerina, at least towards the end of the semester in week 11, was not very motivated to study EAP, saw little instrumental value in it, did not hold a positive attitude towards learning English, lacked a motivating Ideal L2 self guide, and was less confident in her ability to use EAP than the other students.

Table 4.12 Motivation constructs scores of student C6 (Katerina)

Code	Motivation Construct	W11
A	Intended Effort	2.2
B	Ideal L2 Self	3.5
C	Instrumentality (promotion)	2.4
D	Instrumentality (prevention)	3.167
E	Linguistic Self-confidence	3.5
F	Ethnocentrism	2.25
G	Parental Encouragement / Family Influence	1
H	Attitudes towards learning English	1
I	Integrativeness	3.6
J	English Anxiety	3.2

Data from her motivation journal revealed that over the five weeks that she completed the journal her motivational disposition ranged from being *4 – very motivated* to *0 – very demotivated* (see Figure 4.7). During the majority of this time, Katerina's motivational disposition was in a demotivated state. Her motivation was highest in the middle of week three, and lowest in weeks four and five.

Figure 4.7 Motivational disposition of standard level student C6 (Katerina)

Table 4.13 lists the top five most frequently referenced thematic codes for each week of her journal. Katerina frequently cited moods and emotions as both motivators and demotivators. The student expressed the fluctuation of her motivation in this way: "My long-term goal will not change easily but my state of mind changes a lot" (student C6, interview, week 10). The student also cited not getting enough rest or sleep and being tired as demotivating factors. This was especially the case in week four, one of the times where the student's motivation was at its lowest. Her last entry in the motivation journal in week six suggest, perhaps, why the student stopped writing in the journal: "It's boring to learn EAP. I can't find any pleasure in class."

Table 4.13 Top five most frequently referenced codes for each week of Katerina's (C6) journal

Week Number	Top Five Most Frequently Referenced Codes
2	Being or feeling – moods and emotions (4), goals (2), rest and sleep (2), friends (1), don't enjoy class (1)
3	Heavy workload (2), no class (2), being or feeling – moods and emotions (2), good marks (2), tired (1)
4	Rest and sleep (5), being or feeling – moods and emotions (3), meetings (1), assignments (1)
5	Assignments (1), pressure (1)
6	EAP is boring (1), being or feeling – moods and emotions (1), want to have fun (1)

While Katerina discontinued writing in her motivation journal in week six, she did provide insights into the dynamics of her motivational disposition beyond week six in her interview in week 10. Katerina explained that there was a general pattern to her motivational disposition across the week, and that the time and day of EAP classes had a lot to do with it. She felt her motivation to study EAP each Monday was low because she was not very willing to transition from "playing on the weekends" to going to class. As she had no EAP class on Wednesday, she thought of Tuesday as a "little weekend", and this motivated her to study more on Tuesdays and

Wednesdays. On Thursday, because her EAP class started at nine in the morning, she had little desire to attend class and her motivation levels were lower. She was never motivated to study on the weekends.

In addition to the time and day of classes affecting her motivational disposition, the student identified being sleepy, moods and emotions, and feeling that EAP class is boring and unhelpful as significant demotivators:

> *Student:* Maybe when I'm sleepy, when I'm angry, and maybe I am too happy
> *Interviewer:* Ok, so when you are sleepy, angry, or too happy. Tell me a little bit more about those... why are you too sleepy sometimes?
> *Student:* I stay up late for playing my phone so playing games or dealing with my deadlines... so I will get sleepy next day and I can't get any information in class.
> *Interviewer:* Ok, tell me about being angry.
> *Student:* Most of the angry… angry about myself... I think I'm so stupid... I can't do anything well...
> *Interviewer:* So you get frustrated with yourself?
> *Student:* Yeah.
> *Interviewer:* And how does that affect your motivation?
> *Student:* It's just I think I can't learn anything in EAP class so my motivation is very down… the things in EAP class can't help me with my English or my skill.
> *Interviewer:* So do you mean that if you feel like you are not good enough to learn?
> *Student:* No, I think maybe EAP seems don't help me a lot... I think if it's useful I will... my motivation is higher, and if I think it's not helpful for me I will not uh... listen to class.
> *Interviewer:* So how does this connect to your comment about being frustrated with yourself?
> *Student:* I think I might learn something else instead of to attend the class. I can learn something helpful to let me uh...
> *Interviewer:* So are you angry at yourself or are you angry at the situation?
> *Student:* The situation.
> *Interviewer:* So when you attend class and you feel like what is being taught isn't very useful then you can get frustrated and you feel like you could better use your time for something else.
> *Student:* Yeah.
> (student C6, interview, week 10)

The above conversation shows how demotivating factors, through their interaction with each other, can amplify their effect on the student's motivational disposition. Katerina, having opted to stay up late playing games or working on assignments, was tired and already in a negative motivational disposition at the start of class. Because she was tired and found EAP boring, the student did not apply herself in class and therefore did not learn a great deal. What she did manage to learn was not found very useful, and so she wanted to expend her time and energy doing other activities.

When asked whether factors inside or outside of the EAP class had a stronger demotivating effect, Katerina explained that factors outside of the EAP class were more demotivating. She felt because the teacher and students' behaviour were more or less the same during each EAP class, outside factors were more likely the source of demotivation. Poor weather and quitting social activities such as a student band were cited as examples of such external demotivating factors.

Factors she found motivating to study EAP included receiving encouragement and feedback from the teacher, having conversations with the teacher and students in class, and being in a good mood. When asked why receiving encouragement and feedback from the teacher or having conversations with other students in class improved her motivation, she said it was because they improved her mood. A good mood was a mood in which she wanted to learn and wanted to participate. A good mood could be caused by any number of factors, such as not having to be woken up by an alarm clock (getting plenty of rest) or listening to a good song. Motivating factors inside the EAP classroom were viewed as having a more positive effect on her motivation than motivating factors outside the classroom.

To summarize, Katerina was one of the most demotivated students that participated in the study. While a diverse array of factors inside and outside of the class affected her motivation to study EAP, the student attributed her mood as being the primary influencer of her motivation levels. The negative effects that a poor mood had on her motivation levels to study EAP were exacerbated by her beliefs that EAP class was boring and not useful.

Section 4.2.10 Summary of Case Studies

The characteristics of these five case study EAP learners, along with a description of their dynamics of motivation and accompanying motivating and demotivating factors are listed in Table 4.14 below. Having provided a detailed analysis of how and why the motivational disposition of five case study students changed over 10 weeks, the following section will present a model for understanding the dynamics of motivational disposition of EAP learners in the first stage of the study, using a CSDT lens.

Table 4.14 Summary of individual case study students

Student	Learner Characteristics	Dynamics of Motivation	Motivating Factors	Demotivating Factors
Jack (D1)	-CEFR B2 proficiency -High achieving student -Focused on assignments, exams, classes, and club leadership responsibilities	-Often changed drastically between motivated and demotivated states -Lowest in weeks four and five -Generally higher and more stable in weeks six through nine	-Primarily internal to the EAP classroom -Interacting and learning from classmates and EAP teacher -Sense of accomplishment and personal development in completing EAP assignments -Parental acknowledgement of academic achievements	-Primarily external to EAP -"Negative chain reaction" of the following: -Heavy workload due to major classes and club leadership responsibilities -Negative emotions (e.g. feelings of loneliness and inadequacy) and "mental discomfort" -Being physically ill
James (A7)	-CEFR B1 proficiency -Lacked a long-term plan or clear goal -Viewed himself as having a lack of self-confidence and self-control	-Changed frequently between motivated and demotivated states -Lowest in week four -Generally higher at the end of weeks five and 10	-Primarily external to the EAP classroom -Role models in his family -Role models of Non-Native English Speakers who speak English well -L2 self guide (envisioning himself one day traveling and using English)	-Primarily external to the EAP classroom -Lack of a long term plan or clear goal -Roommates and friends who did not study -Lack of self-control -Absence of an authority figure stipulating when, where, and what to study
Susan (B3)	-CEFR B2 proficiency -High achieving student -Focused on assignments, exams, and classes	-Motivated for the majority of the 10 weeks -Lowest in weeks four and nine -Never became very demotivated	-Primarily internal to the EAP classroom -Desire to perform well on assignments, presentations, and exams -Attention and support from her EAP teacher	-Primarily external to the EAP classroom -Friends -Poor weather -Feeling tired from staying up late working on assignments in architecture classes -Marks not high enough to continue in the advanced class

Table 4.14 Summary of individual case study students (continued)

Student	Learner Characteristics	Dynamics of Motivation	Motivating Factors	Demotivating Factors
Emily (E17)	-CEFR B2 proficiency -Confident in her English abilities -Frequently experienced depression -Viewed self as lacking self-discipline	-Changes frequently between motivated and demotivated states -Did not complete weeks five-11 in her journal, but data from her interview and motivation questionnaires suggest she a decline in motivation during this period	-A mix of factors internal and external to the EAP classroom -Good moods -Good weather -EAP teacher -EAP groupmates -To learn information regarding assignments and exams (marks)	-Primarily factors external to the EAP classroom -Negative moods and emotions -Poor weather -Negative experience with others outside of class -Depression -Club and other social activities viewed as more attractive options than studying EAP
Katerina (C6)	-CEFR B1 proficiency -One of the least motivated students in the study (based on motivation construct scores) -Did not view EAP as being important	-Stopped completing motivation journal in week six -In a demotivated state for the majority of the time -Highest in the middle of week three -Lowest in weeks four and five -Fluctuated depending on the time and day of EAP classes	-A mix of factors internal and external to the EAP classroom -Good moods -Receiving encouragement and feedback from the EAP teacher -Conversing with classmates and the teacher in EAP class	-A mix of factors internal and external to the EAP classroom -Often tired from staying up late the day before working on architecture assignments -Negative moods and emotions -Viewed EAP class as boring and not helpful

Section 4.2.11 Understanding Why Changes in Motivation Occur - Evidence of

Motivation as a CDS

The previous sections (4.2.2-4.2.10) have described how motivation levels of the sixty participants changed over time. This section will attempt to account for why the motivation levels changed the way they did by describing motivation as a CDS and providing evidence from the data that support such a claim. It then provides a CDST informed model of dynamics of motivational disposition of EAP learners by drawing upon the findings of the five case studies, as well as data from other participants.

The data suggest that each student has a motivational system that is complex and dynamic. A system, as discussed in Chapter 2, is a collection of elements that relate to each other and are relevant to the dynamics of the phenomenon of interest (van Geert, 2008, p. 180), in this case, motivation. As Dörnyei (2014) noted, "A system is considered complex or dynamic… if (a) it has at least two or more elements that are (b) interlinked with each other but which also (c) change independently over time" (p. 81). Motivation can be considered a CDS because it meets such criteria, which will be made evident by the data presented below.

The data that suggest that motivation is a CDS will be organized according to the characteristics of CDSs. These characteristics are: sensitive dependence on initial conditions; complete interconnectedness; nonlinearity; change through internal reorganization and interaction with the environment; dependence on internal and external resources; constant change with chaotic variation, sometimes in which the system only temporarily settles into attractor states; iteration – the present level of

development depends critically on the previous level of development; and emergent properties (de Bot & Larsen-Freeman, 2011).

Section 4.2.11.1 Constant Change

First, consider the evidence from the case studies that motivation changes constantly, at times with chaotic variation, in which the motivation system only temporarily settles into an attractor state. Each of the students in the case studies had unique dynamics of motivation to study EAP. The majority of students had motivation trajectories that fluctuated frequently between motivated and demotivated states. Jack, James, Emily, and Katerina are examples of this. A few students, such as Susan, however, were able to maintain more stable and positive levels of motivation and rarely found themselves in a demotivated state. Yet, variation in motivation levels still occurred for these students.

One thing the case studies demonstrate is that the motivation constructs that are frequently used in cognitivism based quantitative studies (i.e. L2 Ideal self, instrumentality, attitudes towards learning English), while having an influence on motivational disposition, do not account for the drastic changes in students' motivational disposition from day to day. That is to say that students could have relatively stable motivation constructs over 10 weeks, but these alone do not explain why frequent changes from motivated to demotivated states or vice versa occur. There is evidence that they do influence motivational disposition, however. James is an example of this, as his high score in L2 Ideal self (5.333 in weeks two and 11) is reflected in comments he made explaining that his desire to become similar to fluent non-native English speakers was a motivating factor throughout the semester.

The reason why the motivation of these students changed so frequently is likely due to many of the other characteristics of CDSs, including: sensitive dependence on initial conditions; complete interconnectedness; nonlinearity; change through internal reorganization and interaction with the environment; dependence on internal and external resources; and iteration, where the present level of development depends critically on the previous level of development.

Section 4.2.11.2 Sensitive Dependence on Initial Conditions

One reason why the motivational disposition of the students changed so frequently is that their motivation to study EAP at the beginning of class each day, or when they returned to their dormitory, was dependent on the conditions of that moment and events that led up to that particular moment.

Evidence for this comes from the many times that students reported that the time and day of EAP class had an influence on their motivational disposition. In an interview with student A4, for example, the student explained that at each time period that EAP class could be in a day there was always a contextual factor that made her not want to study EAP:

> *Interviewer:* So can you tell me about being sleepy and how that affects your motivation?
> *Student:* If I am sleepy I will not pay attention to what you say carefully. I will think I want to sleep... I want to sleep... because the time of the class is not good for me… it was 1 o' clock pm… it's the time people need to sleep.
> *Interviewer:* So the time EAP class is held can affect your motivation to study EAP.
> *Student:* Yeah because I feel sleepy at that time.
> *Interviewer:* Is that related to lunch? Why do you feel sleepy at that time?

> *Student:* Just EAP class. If I am playing my phone I will not feel sleepy, when in class I will feel sleepy.
> *Interviewer:* If EAP is at a different time… so there are different times like class at 9, 11, 1, 4… so which of those times do you prefer? Do those times affect your motivation?
> *Student:* Prefer? Actually all of those times I don't like because the 9 o clock I feel sleepy and 11 clock I feel hungry and 1 o'clock I feel sleepy and 4 o clock is the last class of the day and I will think I want to go play.
> *Interviewer:* So no matter what time of day there is something that makes you not want to be here.
> *Student:* Uh huh.
> (student A4, interview, week four)

In addition to this, many students, when ascribing a reason for their motivation level in their motivation journals, commented on events that immediately preceded class or the time they reflected on their motivation levels. Student E5, for example, identified her physical education class, which immediately preceded one of her EAP classes, as having a negative effect on her motivation to study EA during class. In her motivation journal the student wrote "P.E. class is exhausting" and assessed her motivation level to be *1 – fairly demotivated* (student E5, motivation journal, week four, Monday). In an interview she explained why this was the case, saying "I think because right after my P.E. class this is EAP class, and my muscles are all sore, and I'm really like sweating and it's not a comfortable situation" (student E5, interview, week four). In other words, the initial condition of the learner (being sweaty, sore, and uncomfortable) led to the student reporting herself as being in a poor motivational disposition.

While many more examples from the data could be used to provide further evidence that motivation is sensitive to initial conditions, the two examples above are sufficient. These two examples also demonstrate another characteristic of CDS and motivation, namely that within a CDS all parts are connected to all other parts.

Section 4.2.11.3 Complete Interconnectedness

It is apparent from the data that there was a diverse array of factors internal and external to the EAP language classroom, as well as internal and external to the language learner, that affected students' motivational disposition to study EAP. Factors internal to the EAP classroom included things such as EAP related assignments and exams, the teacher, groupmates, classmates, content of class, and even the time and day of the EAP class. External factors to the EAP classroom included factors such as teachers, assignments, exams, and schedules of other classes; club and other social activities; significant others such as friends, roommates and family members; entertainment (e.g. movies, TV shows, video games, phones apps); and the weather, to name but a few of the most common.

Internal to the language learner were factors affecting motivational disposition such as affect (i.e. mood and emotions), cognition (i.e. mental resources available to be expended on studying), and various constructs related to motivation (e.g. L2 self guides, attitudes towards learning English). Students' overall well-being, including their physical and emotional or mental health, also played a pivotal role in shaping students' motivation; Jack and Emily are respective examples.

There was a plethora of factors that students cited that seemed at first to have no relevant connection to EAP class or motivational disposition to study EAP. Data from the interviews clarified that these seemingly unrelated factors affected students' moods and emotions, which then ultimately influenced students' motivational disposition to study EAP. Eating food that students liked is one such example.

Student E13 explained how a restive experience of enjoying good weather by reading a good book and eating an ice-cream cone at a park led to her having a good mood, which in turn led to a willingness to study English:

> *Interviewer*: What about ice-cream?
> *Student*: Ice-cream... I think it's just that I'm kind of having this book at my hand and my friends ask me to have an ice-cream... and so we have this ice cream in some place like a park and it's very relaxing to have an ice-cream while reading.
> *Interviewer*: So you're reading while at the same time having ice-cream, you are at a park having a nice relaxing time… so you used the word with weather with having a good mood.
> Student: Yes
> *Interviewer*: So do you think having a good mood is important for being motivated for studying English?
> *Student*: Yes, if I'm sad or something like that then I'm not really into anything I just want to listen to some music or sleep.

Other examples of seemingly unrelated phenomena that affected students' moods and motivational dispositions include a student dreaming of his girlfriend, a student being upset because her roommate and friend broke up with her boyfriend, and a student who was too sad to focus on what was being discussed in class because she watched the movie *Phantom of the Opera* just before class. These examples are but a few from the data that highlight the finding that a myriad of factors in the motivation system, both internal and external to the language learner and language classroom, are interconnected to each other and ultimately to motivational disposition.

Perhaps the best example of the interconnectedness of factors both internal and external to the language learner is that of Jack. As noted in 4.2.5 above, when Jack was explaining what factors he found demotivating he remarked that he was unable to list the factors in an order from most demotivating to least demotivating because the factors were interrelated and formed, in his words, a "chain reaction". In an

attempt to complete all his assignments and club responsibilities Jack stayed up late, thereby compromising his physical health. Despite becoming ill, he continued to work diligently. He was unwilling to take a rest because of his "personality flaw" whereby he was unwilling to let others do the work. The interplay of these factors led to a downward spiral, and this interplay was the reason why Jack felt he could not separate the influences that these factors had on his motivation levels. The case of Jack is indicative of the complete interconnectedness of factors within the motivational system.

Section 4.2.11.4 Non-Linearity

A major reason why students' motivational disposition changed frequently and in different ways is the non-linear relation between the myriad of factors internal and external to the language learner and the language classroom mentioned in the previous section. Non-linearity essentially means that the same input from a factor does not result in the same output. In other words, the same influence does not always produce the same effect. This was made evident in the data in two major ways. First, the non-linear nature of the motivational system and its components was made evident by the data that suggested that the same factor affected students in different ways. While a challenging assignment may act as a powerful motivator for one student, the same challenging assignment may serve a source of demotivation for another student. An additional example that demonstrates how the same factor can affect students in different ways is the effect that physical education classes had on some students' motivational disposition to study EAP in class. Student A14, for example, cited his football class as having an invigorating positive influence on his motivation level: "I am full of vitality, because I had a football lesson in the

morning" (Student A14, motivation journal, week three, Friday, motivation level *3 – fairly motivated*). This comment stands in contrast to the comment highlighted previous by Student E5 who explained that she was in a demotivated state to study EAP because she was sweaty, sore, and feeling uncomfortable due to exerting herself in her physical education class just before EAP class. These examples demonstrate that the same factor can influence students' motivational disposition in completely opposite ways.

A second way the non-linear nature of the motivational system and its components was made evident by the data is the finding that not only did the same factor have different effects on different students, the same factor also had different effects on the same student at different times. Student A14 and his comments on physical exercise provide a good example. While student A14 found physical exercise to have an invigorating and positive effect on his motivation on Friday in week four, he cited playing football as having a tiring effect, lowering his motivation for Wednesday and Thursday of the same week:

> I have a 7v7 football game and will be a linesman. That's makes me very tired. (Student A14, week four, Wednesday, motivation level *2 – slightly motivated*, -2 from the previous day)

> I'm very tired now because of football games. I may go to sleep after this class. (Student A14, week four, Thursday, motivation level *2 – slightly motivated*, no change from the previous day)

He referred to playing football two more times in his motivation journal, once with a positive influence on his motivation, and once with a negative influence on his motivation:

Playing football and hockey make me full of energy. (Student A14, week five, Sunday, motivation level *3 – fairly motivated*, no change from previous day)

Because of football game, I'm too tired to learn. (Student A14, week eight, Saturday, motivation level *0 – very demotivated*, -3 from the previous day)

In total Student A14 wrote about how playing football affected his motivation five times. Three of these times playing football had a negative effect because it made him too tired to learn; two of these times playing football resulted in him feeling full of energy and in a good motivational disposition to study EAP. While not made apparent from the data, it is possible that the effect that football had on the student's motivational disposition was related to whether or not the student performed well or won the match. Regardless, these quotes underscore the finding that the same factor can affect the same student differently at different times, thereby implying a non-linear relation between factors in the motivational system. These examples also show how factors may interact with each other, and that it is the interplay between these factors that ultimately leads to a particular emergent motivational disposition. More on the emergent nature of motivational disposition will follow later.

Section 4.2.11.5 Change through Internal Reorganization and Interaction with the Environment

Many of the examples previously cited show how there are two forces at work. There are internal processes where factors related to student moods and emotions (affect), resources and ability to focus and learn (cognitive resources), and motivation constructs and identity (L2 self guides, instrumentality, etc.) interact with one

another to ultimately shape the motivational disposition of the learner. Second, often serving as the catalyst for these interactions and internal processes, are factors stemming from the educational or social and personal contexts of the learners. Take for example the student who reported her motivation as being low because she had watched *Phantom of the Opera* just before class. The student's emotions were heavily influenced by the movie. Being in a sad and downcast mood she found it difficult to focus in class. Her inability to focus in class lead to her being less motivated to expend effort to learn.

This particular student's motivational system is but one of many motivational systems, as each student in a classroom has their own motivational system and these systems interact with one another. Susan, for example, commented about how her motivation was influenced by the motivation levels of students around her. She noted that the classroom had a particular atmosphere, and if on a particular day there was a poor learning atmosphere where students were unwilling to participate, then this atmosphere affected her mood and willingness to participate. By not participating the student was reinforcing the negative learning atmosphere. Another student, Susan, expressed it this way: "if other people are not attending class and there aren't a lot of people attending class, then you wonder if you really need to go to class" (student B3, interview, week 10). These examples demonstrate that the two forces at work, internal processes and the contextual environment, are related and influencing each other, thereby establishing a feedback loop (yet another characteristic of CDSs) where the individual motivational system of learners and the larger system of the classroom are dynamically changing and influencing each other.

Section 4.2.11.6 Dependence on Internal and External Resources

Both the individual motivational system and the classroom system are dependent on internal and external resources. Consider, for example, the case of Jack, who, as noted in section 4.2.5 above, explained that a heavy workload and poor physical health lead to a period of demotivation to study EAP. Jack remarked that due to having stayed up late to complete assignments and club responsibilities he compromised his immune system and became ill. Although he was ill he continued to expend effort to complete his assignments and club responsibilities. The human body, however, has limitations and needs certain resources (oxygen, nutrients, sleep, etc.). As Jack continued to deprive himself of sleep he was straining his body, pushing it to its limits. He noted that despite continuing to expend great effort on completing his assignments, such efforts were less fruitful as cognitive and physical resources were expended. Other examples from the data suggest internal resources (e.g. memory, ability to focus, ability to process information, physical energy, having time to learn) are limited, and motivation is frequently lowered when these resources are depleted.

There was also evidence that motivation was influenced by external resources which are also limited. One example of this is the support students received from their tutor. Students generally found receiving feedback from their EAP teachers on their written coursework as being motivating. Yet, the amount of time the teacher has to devote to each students' coursework is limited, and this potentially affects the quality and quantity of the feedback.

Section 4.2.11.7 Iteration

The data indicate that motivation develops iteratively. That is to say that students'

present level of motivation depends on the development of previous levels of

development. This was made apparent in both the motivation journals and focus

groups where many students noted that when they made a decision not to study EAP

they would feel guilty for their inaction and later would study extra hard to make up

for their lack of effort. Inaction sometimes led to feelings of guilt, an awareness of

feelings of guilt then often lead to a change of motivational disposition, which then

lead to action. One student in the focus group expressed how his recognition of his

slacking and subsequent guilt lead to higher levels of motivation and change:

> Maybe there was sometimes where I am so occupied by other activities and I
> keep having those times for EAP... so at that time I feel super guilty and
> super high motivation and desire to study EAP. (student D7, focus group
> discussion two)

Another student in one of the focus group discussions explained that by writing in his

motivation journal he was required to reflect on his motivation levels, and, whenever

he assessed his motivation level to be *0 – very demotivated,* his desire to put more

effort into studying EAP increased.

> *Focus group discussion leader:* Did [the motivation journal] affect your
>   motivation?
> *Student:* Yes.
> *Discussion leader*: In what way?
> *Student:* Mostly positive because if one day you wrote "zero" and had to
>   explain why, then the next day you will be more motivated.
> *Discussion leader:* Did you feel guilty after you wrote a zero?
> *Student:* Yeah, when I review that part I also feel guilty - always guilty.
> (student D16, focus group discussion one)

This highlights the importance of metacognition, as the data suggests that if students are aware of low motivation levels in the past then they are more willing to expend effort in the present. This demonstrates the iterative nature of the development of the motivational system.

Section 4.2.11.8 Emergent Properties

Emergent properties of a system are generally higher-level properties that arise from the interaction of lower-level components (de Bot & Larsen-freeman, 2011, p. 17). The data indicate that the motivational system may have several emergent properties, such as students' moods and motivational dispositions. The idea that motivational disposition (i.e. students' willingness to expend energy to learn at any given moment) to study EAP is an emergent property of the motivational system, is supported by the data. Many students in their journal, for example, wrote that while they could identify what their motivation level was on a particular day, they sometimes had difficulty in explaining why they had that specific motivation level or disposition to study:

> I don't know (student A5, motivation journal, week two, Tuesday).
>
> I don't know, maybe because I'm tired (student B4, motivation journal, week nine, weekly reflection question three).
>
> I'm not happy. I don't know the reason, and don't have motivation (student A6, motivation journal, week 11, Monday).
>
> Actually I don't know why my mood is so great today… maybe because I like the sweater I weared today. So I feel energetic to learn (student A11, motivation journal, week two, Friday).

The fact that students could recognize that their motivational disposition was at a particular level, but were unable to provide an answer as to why it was at this level, suggests that motivational disposition is a patterned outcome of self-organisation that emerges without a central controller; the students or others are not directing or engineering it. The difficulty they experienced when they were trying to explain why their motivation level was at a particular level is likely due to the non-linear relationship and subsequent influence that a myriad of factors internal and external to the language learner and language classroom are having on the students' motivational disposition to study EAP.

The data also suggest that emergence of a particular motivational disposition was due to the interaction of multiple systems and the internal components of those systems. Outside of the language learner several systems were identified. First, there was the EAP classroom that included factors such as the teacher, classmates, groupmates, assignments, exams, the time of class, etc. Second, there were students' other classes that included the teacher, classmates, assignments, etc. Third, there was the personal life of the students (clubs, friends, roommates, family, work, etc.) Fourth, there was the cultural and environmental climate (e.g. cultural lifestyles, expectations, the weather) that made up the larger backdrop of students' lives. Many of these factors overlap and interact with each other, resulting in a particular motivational disposition that is constantly changing as elements in the various nested systems change.

Section 4.2.11.9 Putting it Together: a CDST Model of the Data

In an attempt to help the reader more fully understand why the motivational dispositions of EAP learners changed the way they did, this section will present a

CDST informed model of the data. Using a CDST lens to understand the data is merited because, as the above sections have shown, motivation has all the characteristics of a CDS, or in other words, the argument that motivation is a CDS is grounded in actual empirical data. Given the complexity of the model, it will be presented in pieces, with each piece discussed before another is added. It should also be noted that any 2-D representation of the complex and dynamic nature of motivation is bound to be an oversimplification of the complex processes at work. The 2-D model is meant to serve as a basic visual aid to help the reader more fully comprehend the motivational disposition as an emergent property of nested CDSs and internal elements. As such, the model does have its limitations; it is not possible, for example, to include all the internal and external factors that influence motivational disposition. Nevertheless, it is hoped that the model will help readers to understand the complex and interconnected nature between motivational disposition, other elements internal to the motivational system, and other nested systems, as made evident from the data.

The first piece of the puzzle is the diverse array of factors external to the language leaner that constitute various nested systems. These systems include the EAP class (the teacher, classmates, groupmates, materials, facilities, etc.), the larger university context (other university students and teachers, clubs, etc.), other aspects of students' lives (friends, family, work, living environment, etc.), and the larger cultural and environmental climate (cultural lifestyles, expectations, the weather). These nested systems are depicted in Figure 4.8. It is important note that there can be some overlap in regard to what system particular agents can be found in. Groupmates in EAP class

for example, could also be friends, or even potentially roommates, thereby spanning

multiple nested systems.
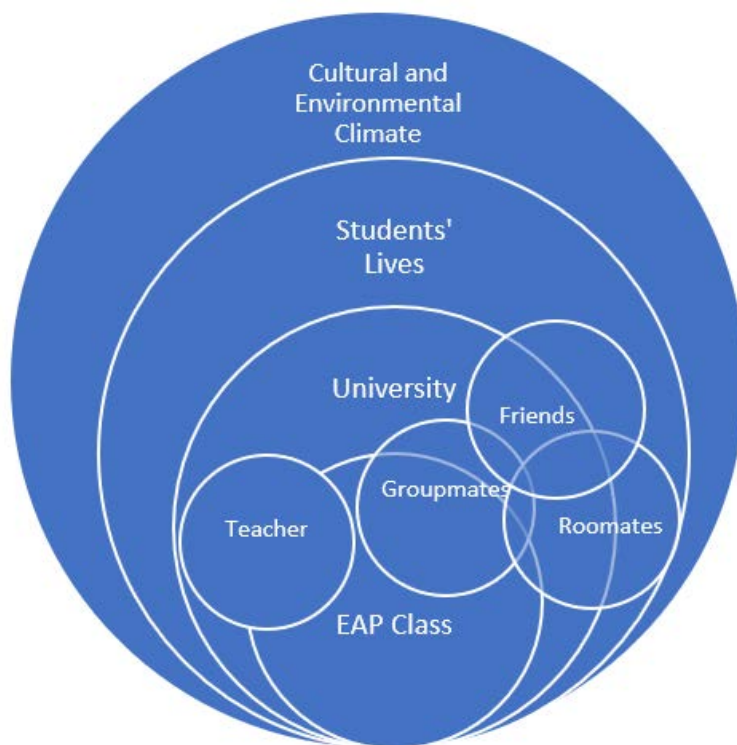
Figure 4.8 External nested systems

The motivational disposition to study EAP was affected by a diverse array of factors;

using a CDST lens helps elucidate the complex interaction of these internal and

external factors to the language learner and EAP classroom. From a CDST

perspective, the data suggest that there exists a motivational system for each student.

This system includes factors internal to the language learner, such as affect (i.e.

moods and emotions), cognition (i.e. cognitive resource available to be expended),

and motivation constructs (e.g. identity, self-guides, instrumentality). This system is

interconnected to other nested CDSs, and the components of the motivational system

are influenced by the components and agents of these other nested systems. The EAP

classroom is an example of a system different from, but connected with each

students' motivational system. The EAP classroom has components and agents (e.g. the teacher and groupmates) that exert an influence on components within each students' motivational system. The complex and dynamic interactions of these nested systems and system components results in students' motivational disposition as an emergent property. In other words, students' willingness to put in effort to learn EAP at any given moment arises from the non-linear interplay of a myriad of factors internal and external to the language learner and EAP classroom.

The internal factors of affect, cognition, and motivation constructs are influenced by external factors and by each other. A diverse array of external factors, for example, affected students' emotions. The weather, food, movies, and disputations with others are but a few examples cited by students as having an influence on their emotions. As an example of external factors influencing students' motivation constructs, James remarked how when he saw online videos of non-native English speakers travelling the world and speaking English he became more motivated to study because this helped him visualize his future L2 self guide that is capable of doing the same thing. These internal and external factors can also influence each other. A student, who reported being sad at the beginning of class because she had watched *Phantom of the Opera,* noted that her sadness affected her ability to focus. In other words, she had less cognitive resources (e.g. attention) available to study as her sadness and the movie demanded her attention.

This internal system, and its relation to external nested systems, is depicted in Figure 4.9. Situated in between the internal motivational system and the related external systems is the students' overall well-being. There was evidence from the data that

students' emotional and physical states acted as both a factor and a filter. In other words, not only did particular physical or emotional states (e.g. being ill) affect a students' motivational disposition, they also amplified or dampened the influence that external factors exerted on internal factors and the resultant motivational disposition. Students such as Jack and James, who suffered from physical illness at certain points in the semester, are examples of how poor well-being can dampen the normally motivating influence of external factors, such as EAP assignments. Emily, who experienced depression, is an example of how poor mental health can also dampen the positive influence of external motivators. When students were in a good physical and emotional state the positive influences of external factors on motivational disposition seemed to be amplified. The opposite is true for how overall well-being modified negative influences stemming from external factors. That is to say that if students' physical and emotional states were stable and in good conditions then negative influences on motivational disposition from external factors were dampened, rendering them less effective as sources of demotivation. If the physical and emotional state of a student was poor, then negative influences on motivational disposition from external factors were amplified. Figure 4.9 describes these dynamics by a series of coloured arrows. First, the yellow arrows represent the influence that external factors have on internal factors, before these influences are amplified or dampened by students' well-being. The orange arrows signify the influences that external factors have on internal factors after they have been amplified or dampened by students' well-being. The green arrows in the internal system represent the influence that internal factors have on each other.
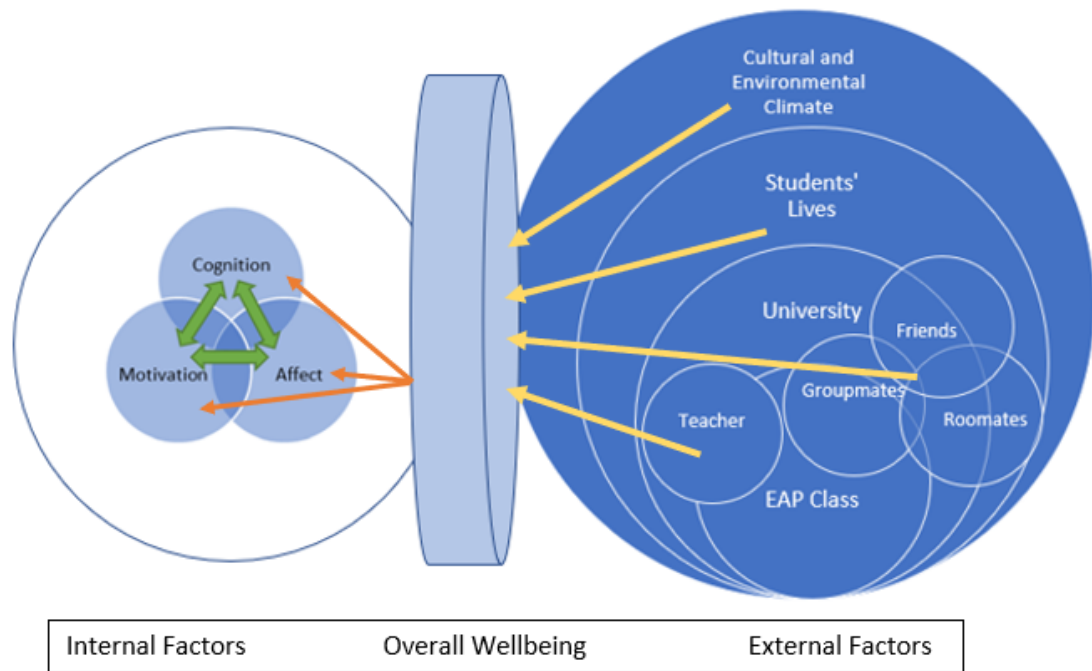
Figure 4.9 Internal factors, overall well-being, and external factors

A couple of more elements need to be included to complete the model of motivational disposition as an emergent property of internal and external nested systems (see Figure 4.10). First, motivational disposition emerging from the interplay of internal components (which themselves are affected by external factors and well-being) is represented by the two arrows arising from the internal system. Based on their motivational disposition, students choose to act or not. This is signified by the arrow pointing from motivational disposition towards action/inaction. Students' action/inaction then influences the educational and social contexts of their lives, as well as their own cognition, affect, and motivation constructs. These influences are represented by the arrows in green stemming from action/inaction and pointing towards well-being and external nested systems. The student's decision to act or not act is therefore viewed as having a potential effect on others around them (groupmates, classmates, roommates, the teacher) and even his or herself.
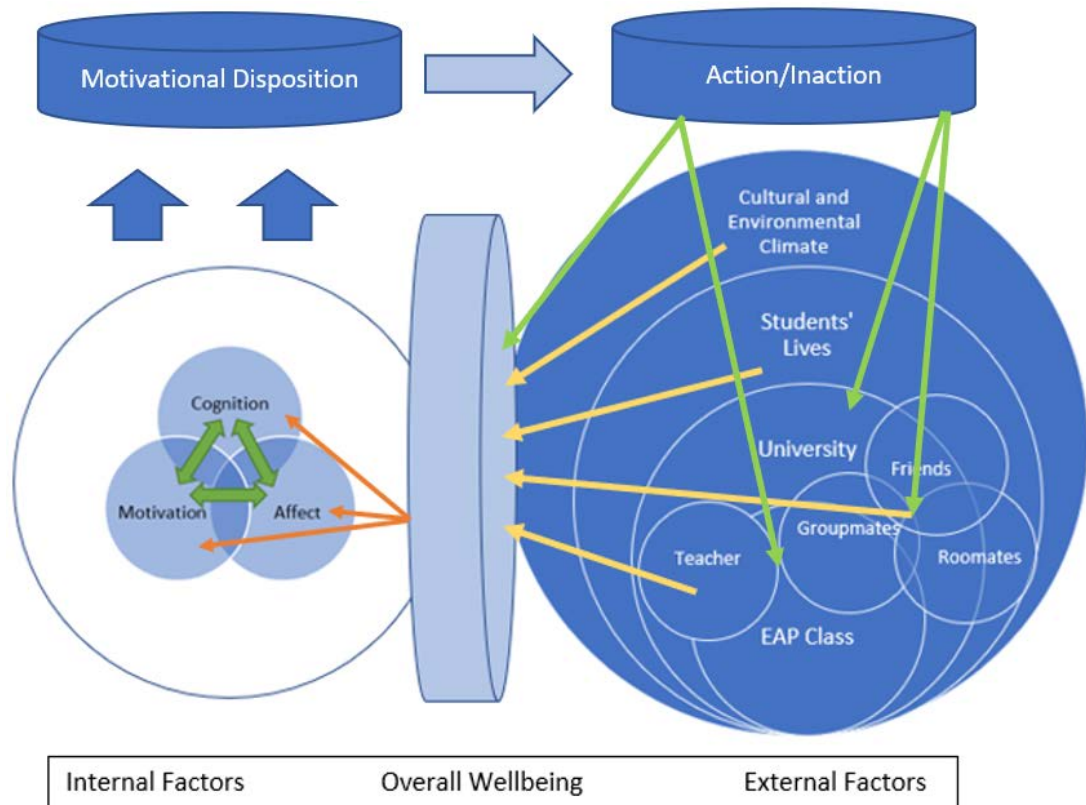
Figure 4.10 Motivational disposition as an emergent property of internal and external nested systems

Again, it is important to note that this 2D representation of motivational disposition

and its relation to factors internal to the motivational system and external nested

systems is in many ways an oversimplification of the actual processes at work. A

reader, for example, might interpret the model to mean that each of these influences

happen sequentially and are monodirectional. This view would be an incorrect

interpretation of the model and does not fit the data. Rather, multiple processes are

occurring simultaneously, internally and externally to the language learner. Each

student has a motivational system and each student has a motivational disposition

that arises from the interplay of this internal motivational system and related external

nested systems. Each student is also a part of systems, such as the system at the

classroom level. Like a flock of birds, the action/inaction of one bird will affect all

the other birds in that system because they act like nodes in a network. A push or pull on one node will result in a non-linear push and pull on all other nodes, as all nodes are interconnected.

Figure 4.11 is a visualization of such a network. The teacher, depicted by the square, may be carefully monitoring all students as they complete an activity in groups. The students are organized into groups (represented by the circles and rectangles), with a solitary student unwilling to participate in any group being represented by the lone triangle. While students are likely to be affected most strongly by the students in their groups, teachers know that students can become distracted by other students in close proximity, even if they belong to other groups (this is signified by the connection between the circle and rectangle that are closest together, as well as the triangle and rectangle that are closest together. Even if there is no direct connection from a blue circle student to the lone triangle student, the blue circle students could be influenced by the decision of the green triangle student to not participate. The teacher, for example, may notice the triangle student's unwillingness to participate, and feel pressured to move on to the next activity in order to get the triangle student involved. Or perhaps the teacher may ask the triangle student to join one of the other two groups. This example highlights how all students are interconnected and the action/inaction on one student can have an effect that ripples throughout the system.
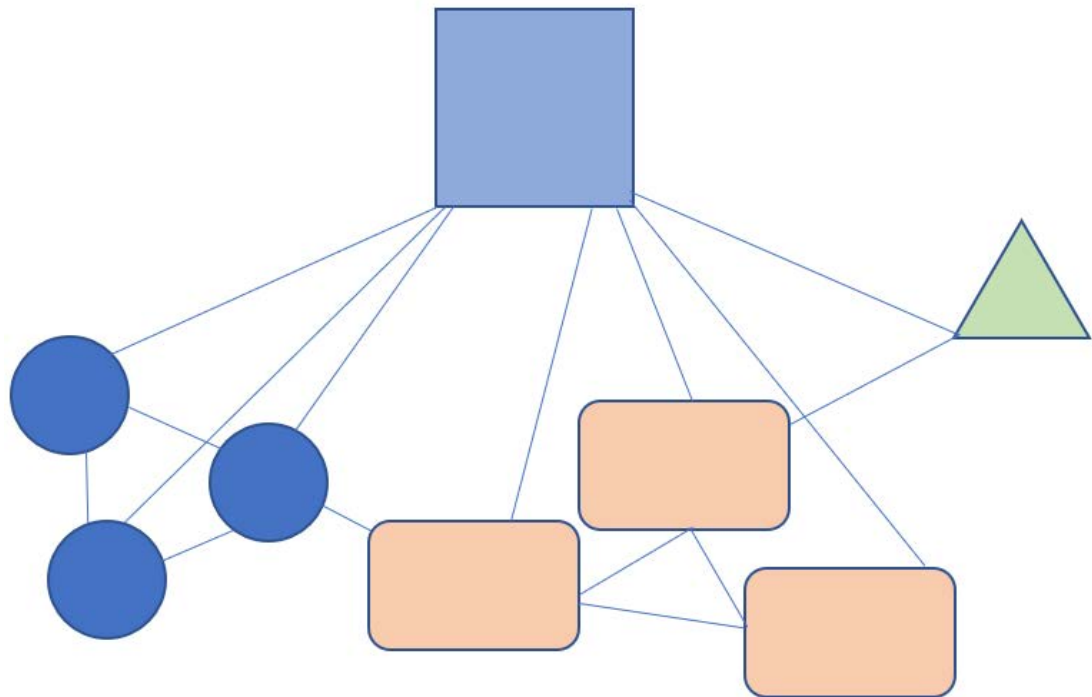
Figure 4.11 Teacher and students as nodes in an interconnected system

In CDST terminology this is a feedback loop. By considering the motivational disposition of individual learners (Figure 4.10) and classroom dynamics (Figure 4.11) in tandem, the importance of feedback loops becomes apparent as each student's motivational disposition and subsequent action/inaction is both affected by and having an effect on the others around them; the teacher, groupmates, classmates, and individual EAP learner are all interacting with each other, influencing each other, and modifying their own behavior, all of which happens simultaneously.

While such depictions of these complex processes are simplifications of reality, it is hoped that they have helped the reader to more fully understand the systems and system components affecting the dynamics of learners' motivation. The figures have their limitations; they can only contain so much information. In actuality many more external factors could be added and additional arrows could be drawn between

external factors (such as within the EAP classroom) as these factors interact with and influence each other. These have been omitted from the model, however, as the diagram simply becomes too overcrowded, rendering it less useful.

Indeed, the motivational system appears to be open and non-final. It is open because it is always susceptible to change as a result of input from new factors in its nested systems and systems it comes in contact with. With the exception of students that become amotivated (i.e. they give up learning altogether), motivation is non-final because motivational disposition will never reach an end state; it continues to evolve and change iteratively. While there may be pockets of stability (attractor states) where the motivational system has settled into, it is only a matter of time before internal feedback of its nested systems perturbs a student's motivational disposition from its place.

To summarize, sections 4.2.1-4.2.11 have addressed the first research question "How does motivation of EAP learners at a TNE EMI university change over the course of a semester in their first-year?". Looking at the students altogether, there were some trends in the aggregate data. First, changes in motivation constructs commonly leveraged in quantitative survey-based research did not account for the changes in students' motivational disposition to study EAP each day. Second, the average motivation of students in the advanced classes shared a similar trajectory as students' motivation in standard pathway classes until week nine, at which point many students in the advanced class lost motivation because of the absence of an EAP assignment. Third, the average motivation level was higher on Monday, lowering

throughout the week, with a slight uptick on Sunday as students prepared for their classes on Monday.

Looking at students individually, it was found that the majority of students' motivational disposition changed frequently between motivated and demotivated states over the course of the semester. Motivational disposition emerged from the complex interaction of factors internal and external to the EAP classroom, as well as internal and external to the language learner. These factors had a non-linear effect on motivational disposition; the same factor affected motivation differently across different times and contexts. Some of the factors most frequently associated with students' motivational disposition were factors relating to their grades, such as assignments and classes, as well as factors relating to students' overall well-being, such as their physical health and emotional state. Students overall well-being appeared to amplify or dampen the influence that external factors had on students' moods and motivational disposition. Students' motivation to study EAP in class each day was subject to the learners' initial conditions and what had occurred in their life prior. Lastly, students' dynamics of motivation continued to evolve based on the resources available to it, including cognitive resources and time to study. Having answered the first and overarching research question concerned about how EAP learners' motivation changes over time, this thesis will turn its focus towards the second and third research questions.

Section 4.3 Salient Motivating and Demotivating Factors

The second and third research questions ask what the salient motivating and demotivating factors are that influence EAP learners' motivational disposition. These

questions prove challenging to answer because, as described in the previous section, the data revealed that a particular factor can exert a range of influences on motivational disposition at different times and in different contexts. Furthermore, through interaction with other factors, influence on motivational disposition may be amplified, dampened, or even have its polarity reversed. Indeed, as pointed out by Jack, it may not be possible to definitively determine any set order of the salient motivating or demotivating factors as this would require isolating factors, removing them from their context and influence from other factors. Nevertheless, a picture of salient motivating and demotivating factors can be painted by investigating how frequently students attribute varying factors to their motivational disposition states.

A matrix coding query of thematic codes and self-assessed motivation levels from data in all students' journals give an indication as to how frequently particular factors were attributed to specific motivation levels. The result of such query is shown in Table 4.15, which displays the 25 most frequently referenced thematic codes and the students' corresponding motivation levels.

Table 4.15 The 25 most frequent thematic codes and motivation levels (all students' journals)

Thematic Code	Motivation Levels				
	0	1	2	3	4
1. Assignments, coursework, homework, projects	25 (4.4)	63 (11.2)	132(23.5)	188(33.4)	155(27.5)
2. Classes	23 (10.1)	51 (22.5)	67 (29.5)	57 (25.1)	29 (12.8)
3. Being or feeling – mood and emotion	9 (5.6)	25 (15.5)	46 (28.6)	48 (29.8)	33 (20.5)
4. Physical health	28 (17.4)	51 (31.7)	52 (32.3)	19 (11.8)	11 (6.8)
5. Time or days	10 (6.1)	22 (13.4)	39 (23.8)	55 (33.5)	38 (23.2)
6. Exams, tests, quizzes, assessments	24 (14.7)	29 (17.8)	40 (24.5)	41 (25.2)	29 (17.8)
7. Good desires	0 (0)	0 (0)	14 (14)	55 (55)	31 (31)
8. Vacation and travel	30 (30.3)	26 (26.3)	22 (22.2)	12 (12.1)	9 (9.1)
9. Busy	4 (5.4)	21 (28.8)	38 (52.1)	8 (11)	2 (2.7)
10. Entertainment	8 (17)	12 (25.5)	10 (21.3)	13 (27.7)	4 (8.5)
11. Friends	6 (12.2)	9 (18.4)	8 (16.3)	16 (32.7)	10 (20.4)

12. Weather	2 (5.9)	5 (14.7)	5 (14.7)	15 (44.1)	7 (20.6)
13. What students did (related to studying)	3 (4.8)	9 (14.5)	8 (12.9)	30 (48.4)	12 (19.4)
14. Clubs	6 (11.8)	18 (35.3)	20 (39.2)	5 (9.8)	2 (3.9)
15. Teachers and tutors	1 (3.7)	0 (0)	6 (22.2)	8 (29.6)	12 (44.4)
16. Other things	5 (14.3)	10 (28.6)	16 (45.7)	4 (11.4)	0 (0)
17. Pressure, stress, weight	2 (13.3)	2 (13.3)	1 (6.7)	6 (40)	4 (26.7)
18. Feedback	0 (0)	7 (17.1)	5 (12.2)	18 (43.9)	11 (26.8)
19. Lack of desire or negative desire	7 (19.4)	13 (36.1)	15 (41.7)	0 (0)	1 (2.8)
20. Having no class	1 (3.5)	7 (24.1)	3 (10.3)	12 (41.4)	6 (20.7)
21. Holiday	6 (28.6)	7 (33.3)	6 (28.6)	2 (9.5)	0 (0)
22. Marks	0 (0)	0 (0)	3 (27.3)	3 (27.3)	5 (45.4)
23. Problems or bad things	5 (26.3)	7 (36.8)	4 (21.1)	2 (10.5)	1 (5.3)
24. Something good happened	1 (5)	1 (5)	0 (0)	8 (40)	10 (50)
25. Classmates	1 (7.7)	0 (0)	1 (7.7)	9 (69.2)	2 (15.4)

Note: Percentages of total references for each thematic code are given in parentheses. 0 = very demotivated, 1 = fairly demotivated, 2 = slightly motivated, 3 = fairly motivated, 4 = very motivated

The data suggest that some thematic codes frequently coincided with a particular motivational disposition. Specific references to marks in students' journals (#22 in Table 4.15), for example, never coincided with a demotivated disposition level. Other thematic codes coincided with a positive or negative motivational state in a heavily skewed manner. For example, comments regarding teachers and tutors (#15) coincided with positively motivated dispositions 96.3% of the time. This would suggest that marks and teachers were primarily motivating factors for the students.

Many of the 25 most frequent thematic codes, however, coincided more evenly across the different motivational disposition levels. References to classes (#2) and exams (#6), for example, corresponded more evenly across the different motivation levels than marks and teachers did. Due to differences in context, these factors were at times motivating, while at other times demotivating. The majority of factors appear to fall in this category.

On its own, a matrix query of thematic codes and motivation levels is inadequate to explain the influence various factors have on motivational disposition. Consider the

case where a student who has assessed their motivation level on Monday to be *4 –*
very motivated (because of an encroaching assignment deadline), and on Tuesday to

be *2 – slightly motivated* (because they are tired of working on the same assignment).

The results of the matrix query of thematic codes and motivation levels shown above

would suggest that in both cases the assignment was motivating; in actuality,

working on the assignment on Tuesday had a negative or demotivating influence on

the student with a net loss of -2 on the motivation scale, and yet the student's

motivational disposition was still in the motivated range. Similarly, if a student

assessed their motivation level on Monday to be *0 – very demotivated* (because they

were physically ill), and then on Tuesday they assessed their motivation level to be *1*

– fairly demotivated (because they spent time resting and felt slightly better), then the

above table would incorrectly give the impression that resting had a demotivating

influence on the student's motivational disposition. A matrix query of thematic codes

and motivation levels is therefore unable to provide a definitive picture of which

factors are the most motivating or demotivating. This being acknowledged, the data

from the query does paint *part* of the picture.

To further explore possible salient motiving and demotivating factors, a matrix query

of the most frequently referenced codes and the change in motivation levels from one

day to the next was conducted. Table 4.16 shows the results of such a matrix query.

Changes in motivation levels refers to the difference in motivation levels from the

day that students wrote about a particular thematic code and the previous day. In

other words, if on Tuesday the student attributed their motivation level of *4 – very*

motivated to an upcoming EAP assignment deadline and the student had selected *0 –*

very demotivated the previous day, then the change in motivation level from Monday

to Tuesday would be *+4,* with the corresponding reason being the assignment

deadline.

Table 4.16 Matrix query results of the most frequent 25 thematic codes and changes in motivation levels (all students' journals)

Thematic Code	Change in Motivation Levels								
	-4	-3	-2	-1	0	+1	+2	+3	+4
1. Assignments, coursework, homework, projects	6	9	35	85	212	112	61	18	5
2. Classes	1	4	22	48	80	38	21	3	3
3. Being or feeling – mood and emotion	0	4	16	31	54	35	13	5	0
4. Physical health	5	11	22	41	47	19	6	1	1
5. Time or days	2	5	10	32	48	30	22	6	2
6. Exams, tests, quizzes, assessments	2	2	14	20	77	36	6	3	2
7. Good desires	0	0	3	14	24	28	14	8	2
8. Vacation and travel	0	5	3	14	60	9	5	1	1
9. Busy	2	2	15	25	19	7	1	0	0
10. Entertainment	2	4	7	14	11	7	2	0	0
11. Friends	0	2	8	10	10	13	3	0	2
12. Weather	0	2	1	4	11	11	1	1	1
13. What students did (related to studying)	1	2	4	16	24	10	3	2	1
14. Clubs	1	1	5	16	26	2	0	0	0
15. Teachers and tutors	0	0	3	1	5	10	4	1	0
16. Other things	0	2	6	0	11	3	0	0	0
17. Pressure, stress, weight	0	0	1	3	7	1	1	0	1
18. Feedback	9	9	2	8	8	15	6	2	0
19. Lack of desire or negative desire	1	2	6	12	14	0	1	0	0
20. Having no class	0	1	3	10	7	6	1	0	0
21. Holiday	0	1	2	7	10	1	0	0	0
22. Marks	0	0	0	3	0	2	2	1	1
23. Problems or bad things	0	2	7	6	2	2	0	0	0
24. Something good happened	0	1	1	2	6	3	3	1	0
25. Classmates	1	0	0	2	3	4	2	1	0

The first major takeaway from the data is that the factors affected students'

motivational disposition in both positive and negative ways; they are both motivators

and demotivators. This being said, some factors were more frequently cited as

motivators than as demotivators. These include classmates, something good

happening in students' personal lives, marks, teachers and tutors, having good desires (e.g. wanting to be successful), and, to a slight degree, assignments.

Factors that were more frequently cited as lowering motivation from one day to the next include problems or bad things happening in students personal lives, taking a holiday, having no EAP class, having a lack of desire or negative desires, receiving feedback on assignments (suggesting the students had a lot more to work on or that their grade was lower than expected), clubs, entertainment (e.g. video games, movies), having a busy schedule, taking a vacation and traveling, and having poor physical health (including being tired).

A large number of factors were cited as being motivating and demotivating roughly about the same number of times. These include students' moods and emotions, the time and day of EAP class, exams, friends, and the weather. One last finding worth noting from the data presented in Table 4.16 is that smaller changes in motivational disposition (+/- 1 or 2 points) were more frequent that larger changes in motivational disposition (+/- 3 or 4 points).

Focus groups were used as a tool to further investigate the salient motivating and demotivating factors as reported by students in their journals. Results suggest that motivating factors were typically associated with factors related to the EAP classroom and demotivating factors were primarily associated with factors outside of the EAP classroom. In total 12 students participated in the focus group discussions, five in the first focus group, and seven in the second. For each of the focus groups discussions, each student was given a list of 28 demotivating factors that were

identified from students' motivation journals. This list of a diverse array of demotivating factors was cut up so that each demotivating factor was on a small thin strip of paper. Students were then asked to consider each demotivating factor and place it in one of three columns on a A3 size paper handout: things that do not affect me, things that affect me in a minor way, things that affect me in a major way (see Appendix 6 for the list of demotivating factors and associated handout). The author then led a discussion in which students were asked to identify the most frequent demotivating factors, as well as whether or not the salient demotivating factors were primarily associated with phenomena related to the EAP classroom or phenomena outside the EAP classroom. In total eight students were in agreement that factors outside of the EAP classroom were most frequently the sources of their demotivation for studying EAP. One student said that factors inside and outside the EAP class were equal in their demotivating force. Three students misunderstood the directions and did not answer the question. This means that of the students that did understand and follow the directions, the majority of the students, eight out of nine students, to be exact, agreed that demotivation to study EAP primarily stemmed from phenomena outside of their EAP class.

In both focus groups the process was repeated using a list that included a diverse array of 39 motivating factors that were identified from students' motivational journals. In total, eight out of 12 students came to the conclusion that motivating factors were primarily associated with factors related to the EAP classroom. The remaining four students disagreed and felt that factors outside of the EAP classroom played a more prevalent role in positively shaping their motivation to study EAP. The major takeaway from the focus group discussions was the possibility that

demotivation to study EAP may primarily stem from sources outside the EAP classroom while motivation to study EAP may more frequently be attributed to phenomena related to the EAP classroom.

Given that factors' influences vary in polarity and strength at different times and in different contexts, creating a list of strictly motivating/demotivating factors would misrepresent the data as well as do a disservice to the complexity of the dynamics of students' motivational disposition to study EAP. What can be done, however, is to identify factors that were frequently motivating and demotivating. A list of factors that frequently served as motivators can be generated by: (1), analysing the factors that frequently corresponded to positive motivation levels in students' journals (*2 - slightly motivated*, *3 – fairly motivated,* and *4 – very motivated*); (2), analysing the factors that frequently corresponded to positive changes in motivation levels (+1 to +4) from one day to the next in students' journals; and (3), by analysing students' answers to weekly reflection questions in their journals where they explained why their motivational disposition improved over the week.

Results of matrix queries of the 25 thematic codes that corresponded most frequently with positive motivation levels are presented in Appendix 14. Results of matrix queries of the 25 thematic codes that corresponded most frequently with positive changes in motivation levels from one day to the next are presented in Appendix 15. Lastly, the results of matrix queries of thematic codes and number of references in reflection questions in students' motivation journals that relate to positive changes can be found in Appendix 13.

The more frequent a thematic code was found in these queries related to positive motivation and a prominent position in the list of factors suggest that the thematic code was frequently acting as a motivator for the students. Some of the most frequent and prominent motivators include assignments, deadlines, and exams that relate to EAP classes, as well as positive moods and emotions, a desire to improve, a desire to be prepared for class, the time and day of EAP class, having enough time to focus on EAP, making significant progress on assignments, EAP teachers, being in a good physical condition (e.g. getting enough rest), and receiving good marks. It appears that the data from the journals corroborate the finding from the focus group discussions that the factors that are frequently acting as motivators are most commonly associated with phenomena related to the EAP classroom. The triangulation of research methodologies therefore confirmed the validity of the data and this finding.

Similarly, a list of factors that frequently served as demotivators can be generated by: (1) by analysing the factors that frequently corresponded to demotivated motivation levels in students' journals (*0 – very demotivated* and *1 – fairly demotivated*), (2) by analysing the factors that frequently corresponded to negative changes in motivation levels (-1 to -4) from one day to the next in students' journals, and (3) by analysing students' answers to weekly reflection questions in their journals where they explained why their motivational disposition changed over the week.

Results of matrix queries of the 25 thematic codes that corresponded most frequently with motivation levels *0 – very demotivated* and *1 – fairly demotivated* are presented

in Appendix 11. Results of matrix queries of the 25 thematic codes that corresponded most frequently with negative changes in motivation levels from one day to the next are presented in Appendix 12. Lastly, the results of matrix queries of thematic codes and number of references in reflection questions in students' motivation journals can be found in Appendix 13.

The more frequently a thematic code was found in these queries and a prominent position in the list of factors suggest that the thematic code was frequently acting as a demotivator for the students. Take for example the thematic code *physical health,* the parent code of many daughter codes that relate to poor physical health such as *being tired*, *not sleeping well,* and *being ill.* This parent thematic code was the second most frequent code that corresponded with the motivation levels of *0 - very demotivated* and *1 - slightly demotivated*. Also, *physical health* was found in the top three most frequent thematic codes when any decrease in motivation occurred from one day to the next for all queries related to negative motivation level change (ranging from -1 to -4). Lastly, *physical health* was the third most frequently referenced topic in students' responses to the motivation journal's weekly reflection question number one, which asked students to reflect on why their motivation went down at any point in the week. Given that the thematic code *physical health* has such a prominent and frequent position in each of these matrix queries, it is reasonable to conclude that poor physical health served as a salient demotivator in the students' lives.

Some of the most frequent and prominent demotivators include assignments, deadlines, and exams that relate to other classes; as well as negative moods and emotions; poor physical health; friends; entertainment; and vacation. While there

were times where students cited EAP related assignments, deadlines, and classes as

being demotivating, the vast majority of cases are unrelated to EAP class. These data

therefore seem to provide further evidence that sources of demotivation to study EAP

are primarily stemming from factors outside of the EAP classroom and learning

experience.

The data from Stage 1 of the study, therefore, suggest that factors that influence

students' motivational disposition to study EAP should not be definitively labelled as

motivators or demotivators. Rather, the complexity of the interaction of these factors

ought to be acknowledged; that is to say that factors can be both sources of

motivation and demotivation, depending on the time and context.

Having established a list of factors that are frequently acting as motivators and/or

demotivators, the thesis has answered the second and third research questions. In

Stage 2 of the study factors that frequently act as demotivators were further explored

by using a quantitative-based survey with the larger student population. The next

section will describe the results of the demotivation questionnaire and further explore

the second research question which asks what the salient demotivating factors to

study EAP are.

Section 4.4 Insights on Demotivating Factors from the Demotivation Questionnaire

A demotivation questionnaire, which was created from demotivating factors

identified from the qualitative data in students' motivational journals, was

administered on a large scale in the TNE context of XJTLU with students in years

one through four of their studies (n=1517). As noted in section 3.7.2.4 in Chapter 3, an exploratory factor analysis was conducted to explore the factorial structure of the demotivation factor scale. The assumptions for conducting a factor analysis were first checked. The Kaiser-Meyer-Olin Measure of Sampling Adequacy indicated a strong relationship amongst variables (KMO=.951); a KMO value greater than 9 is considered 'superb' (Hutcheson & Sofroniou, 1999, as cited in Field, 2009, p. 647). The Bartlett's Test of Sphericity ($\chi 2$ (528) = 28545.959, p < .001) suggested that the data is appropriate for being utilized for factor analysis. A Principal Component Analysis was applied as the factor extraction method.

In total, six factors, accounting for 62.53% of the variance, were extracted (pattern and structure matrices are presented in Appendix 16. Each factor, with its corresponding items and Cronbach Alpha and Omega coefficients, is presented in Table 3.6. The Cronbach Alpha coefficients indicate that the items are reliably measuring the same factor. All factors except Entertainment ($\alpha = .743$) have a Cronbach's Alpha coefficient of greater than .8, thereby indicating that the items are reliable.

Descriptive statistics for each factor were calculated. As previously noted in Chapter 3, participants were asked to consider each item in relation to the following question: 'During your studies at XJTLU, how frequently did the following things lead to a decrease in your willingness to put effort into studying EAP'. Students answered this question by selecting a response on a 9-point Likert-scale ranging from *1 – never* to *9 – always*. This means that the higher the mean of each item and factor, the more frequent that item or factor was found to be demotivating. As can be seen in Table 4.17 below, which lists the descriptive statistics for each factor, *poor physical health* had the highest mean of all the factors, suggesting that this factor was the most frequent demotivating factor. This was followed by having a *lack of focus on EAP, negative moods and emotions, influence from significant others, poor weather,* and lastly *entertainment.* Descriptive statistics for each of these factors and their items will be presented below.

Table 4.17 Descriptive statistics of demotivating factors

Factor	Mean	Standard Deviation	Skewness		Kurtosis	
			Statistic	Std. error	Statistic	Std. error
Poor Physical Health	4.214	1.829	.208	.063	-.738	.126
Lack of Focus on EAP	3.891	1.759	.294	.063	-.608	.126
Negative Moods and Emotions	3.532	1.679	.444	.063	-.521	.126
Influence from Significant Others	3.291	1.736	.514	.063	-.532	.126
Poor Weather	2.946	1.782	.876	.063	.169	.126
Entertainment	2.665	1.710	1.087	.063	.614	.126

The measure for *poor physical health* included six items. These items are presented with their associated means, standard deviations, and skewness and kurtosis statistics in Table 4.18. *Having a lot of deadlines in the near future* had the largest mean (4.71), suggesting that students found this to be the most frequent demotivator. Next

was *not getting enough sleep* (4.48). *Staying up late* (4.48), *feeling tired* (4.15), and *getting sick* (4.02) all had similar means. Lastly, *having lots of classes on the same day* was found to be the least demotivating item for *poor physical health*.

The item that had the highest mean, *having a lot of deadlines in the near future* may not initially appear to be related to poor physical health, but data from the journals and interviews, however, suggest that it was not uncommon for students to experience poor physical health during periods of time where they had many pressing deadlines. Jack, for example, pointed out a negative chain reaction between the need to work on assignments and the inability to work efficiently on those assignments due to poor health. It is not surprising then, that the next most frequently demotivating items relate to sleep, such as *not getting enough sleep, staying up late,* and *feeling tired.*

Table 4.18 Descriptive statistics for items related to *poor physical health*

Item	Mean	Standard Deviation	Skewness		Kurtosis	
			Statistic	Std. error	Statistic	Std. error
18. Having a lot of deadlines in the near future	4.71	2.467	.066	.063	-1.215	.126
25. Not getting enough sleep	4.48	2.428	.216	.063	-1.134	.126
29. Staying up late	4.19	2.470	.312	.063	-1.143	.126
11. Feeling Tired	4.15	2.258	.313	.063	-.931	.126
31. Getting sick	4.02	2.446	.460	.063	-.990	.126
5. Having lots of classes on the same day	3.74	2.403	.548	.063	-.914	.126

The measure for *lack of focus on EAP* was comprised of seven items (see Table 4.19). With a mean of 4.35, *finishing an EAP exam* was the most frequently demotivating item. This is unsurprising given that EAP speaking exams usually occur in week 12, after which it is not uncommon that little new material is

introduced to the students before their final exam. Because their final exam may be weeks away, many students may feel there is no urgency to study EAP. The next two most frequently demotivating items had to do with classes other than EAP class. The four items with the lowest means all had to do with having no plan or goal related to English/EAP and not having an EAP assignment or class.

Table 4.19 Descriptive statistics for items related to *lack of focus on EAP*

Item	Mean	Standard Deviation	Skewness		Kurtosis	
			Statistic	Std. error	Statistic	Std. error
20. Finishing an EAP exam	4.35	2.623	.273	.063	-1.183	.126
22. Having a heavy workload in classes other than EAP class	4.32	2.412	.234	.063	-1.111	.126
27. Exams related to classes other than EAP class	4.07	2.365	.349	.063	-.998	.126
19. Having no plan to study EAP	3.77	2.308	.543	.063	-.784	.126
8. Having no EAP class	3.71	2.551	.627	.063	-.807	.126
21. Having no goal related to English	3.54	2.323	.623	.063	-.706	.126
12. Having no assignment to work on	3.46	2.290	.742	.063	-.501	.126

Third on the demotivating factor list was *negative moods and emotions.* Table 4.20 lists the descriptive statistics for items related to this factor. The majority of these items directly related to negative moods and emotions such as feeling anxious, frustrated, sad, unsure, etc. The only item that did not explicitly relate to a mood or emotion was *having a difficult EAP assignment,* which happened to have the lowest mean. It is not difficult to imagine, however, that negative emotions such as frustration or being anxious may relate to having a difficult EAP assignment.

Table 4.20 Descriptive statistics for items related to *negative moods and emotions*

Item	Mean	Standard Deviation	Skewness		Kurtosis	
			Statistic	Std. error	Statistic	Std. error

6. Feeling anxious or worried	3.73	2.309	.582	.063	-.782	.126
2. Being in a bad mood	3.65	2.261	.604	.063	-.722	.126
28. Feeling frustrated or upset	3.64	2.226	.576	.063	-.736	.126
3. Being uncertain about how to make progress on an EAP assignment	3.63	2.297	.585	.063	-.774	.126
7. Feeling sad	3.51	2.223	.701	.063	-.520	.126
32. Feeling unsure about an EAP exam	3.33	2.269	.799	.063	-.400	.126
24. Having a difficult EAP assignment	3.23	2.035	.792	.063	-.245	.126

The factor *influence of significant others* was measured by seven items (see Table 4.21). Interestingly, out of teachers, classmates, groupmates, friends, the environment of students' dormitory and roommates, it was the EAP teacher who was viewed to be the person who most frequently leads students to experience demotivation. This is surprising given that the data from the motivation journals, interviews, and focus groups suggest that the students' teachers were very rarely a source of demotivation. Possible reasons for the occurrence of this finding will be discussed later, when the findings from Stage 1 and 2 of the research are compared. *The effect of my groupmates on me* and *the effect of my friends* scored similarly, 3.51 and 3.43 respectively. Next was the learners' environment, classmates, and roommates. Last of all was *finding it difficult to understand the lecturer's English (in classes other than EAP)*.

Table 4.21 Descriptive statistics for items related to *influence of significant others*

Item	Mean	Standard Deviation	Skewness		Kurtosis	
			Statistic	Std. error	Statistic	Std. error
26. The effect my EAP teacher has on me	3.57	2.516	.651	.063	-.810	.126
14. The effect of my groupmates on me	3.51	2.290	.631	.063	-.706	.126
16. The effect of my friends on me	3.43	2.348	.736	.063	-.586	.126
33. The effect of the environment in my dormitory or apartment has on me	3.26	2.256	.817	.063	-.394	.126
15. The effect of my classmates on me	3.21	2.202	.858	.063	-.270	.126
23. The effect my roommates have on me	3.11	2.198	.906	.063	-.154	.126
10. Finding it difficult to understand the lecturer's English (in classes other than EAP class)	2.94	2.131	1.062	.063	.144	.126

Fifth on the demotivating factor list was *poor weather.* Table 4.22 lists the descriptive statistics for items related to this factor. There is not much to discuss regarding these items other than items related to cold weather were rated as more frequently demotivating than items related to hot weather. This is unsurprising given that most students are on leave during the summer holiday and are not studying EAP when the weather is warmest.

Table 4.22 Descriptive statistics for items related to *poor weather*

Item	Mean	Standard Deviation	Skewness		Kurtosis	
			Statistic	Std. error	Statistic	Std. error
4. When the weather is too cold	3.17	2.229	.877	.063	-.300	.126
17. When the weather is bad	2.92	2.005	1.053	.063	.269	.126
1. When the weather is too hot	2.75	2.033	1.253	.063	.692	.126

The factor that had the lowest score, and therefore was the least frequently demotivating factor, was *entertainment.* Table 4.23 provides the descriptive statistics

for items related to this factor. The three factors shared similar means ranging from

2.60-2.76, with *playing mobile phone games* being the highest.

Table 4.23 Descriptive statistics for items related to *entertainment*

Item	Mean	Standard Deviation	Skewness		Kurtosis	
			Statistic	Std. error	Statistic	Std. error
9. Playing mobile phone games	2.76	2.158	1.212	.063	.448	.126
13. Watching TV series	2.64	2.065	1.248	.063	.591	.126
30. Playing video games	2.60	2.089	1.279	.063	.600	.126

In addition to exploring demotivators by means of Likert-scale items, the survey also

leveraged open ended questions. Item 34 asked participants to list any other factors

inside EAP class that lead to a decrease in their willingness to study EAP. Students

most frequently wrote about classmates (with many saying that their classmates were

unwilling to speak in English), the learning content, their EAP teacher and the

teacher's methodology. Other less frequently referenced factors inside the EAP class

include the difficulty of the assignments (being too easy or too hard), a negative

classroom environment, and the seating arrangements, to name a few.

Item 35 asked participants to list any other factors outside the EAP class that lead to

a decrease in their willingness to study EAP. Students most frequently wrote about

the weather, being in a poor physical condition, their mood, and pressure from

coursework and exams related to their other courses. Less frequently referenced

factors included a diverse array of phenomena including clubs, food, phones, games,

friends, traffic jams, distance needed to travel across campus, and menstrual cycles.

Item 36 investigated students' opinions regarding whether factors inside or outside

the EAP class have a stronger effect on student's motivation to study EAP. Students

were asked to respond to the following question by choosing a point on a nine-point Likert scale ranging from *strongly disagree* to *strongly* agree:

'How much do you agree or disagree with the following statement? Factors outside of EAP class have a stronger effect on my motivation to study EAP than factors inside of EAP class.' With a mean of 4.65 and standard deviation of 2.342, the data suggest that the majority of students slightly disagreed with the statement. In hindsight, it would have been better to have divided this item into two questions: one addressing sources of demotivation and the other addressing sources of motivation. Given how the question is worded, the data do not offer much insight into whether or not sources of motivation primarily stem from the EAP classroom while sources of demotivation primarily stem from factors outside the EAP classroom, which was one of the findings in phase one of the research.

By comparing the data in stages one and two, some similarities and differences emerge. In regard to similarities, both sets of data highlight the importance of the overall well-being of students. Poor physical and emotional states were two of the most frequent demotivators in both data sets. In regard to differences, the data from stage one suggest that teachers were not a frequent source of demotivation for EAP learners. This is somewhat contrary to the findings of stage two, where teachers were cited as being more frequently a source of demotivation than other significant individuals in students' lives (groupmates, friends, etc.). In a way it makes sense that teachers were more frequently cited as a demotivator in a large-scale questionnaire. One reason for this is that by including a larger pool of students a larger pool of positive and negative experiences with EAP teachers is also included. Furthermore, the participants in stage two had not undergone the extensive 10 weeklong daily

reflections of their motivation levels that participants in stage one had. It is unlikely that a student reflecting on an entire year experience will remember the details of the myriad of factors unrelated to the EAP classroom that have an effect on their motivational disposition to study EAP on a particular day. For example, a student is unlikely to remember the influence that their P.E. class had on their willingness to study in EAP class on a particular day, or a how a friend's breakup with her boyfriend had put them in a negative mood on another day. In the author's opinion, the data from Stage 1 of the study are more reliable given the multi-pronged approach and in-depth reflection of the students.

Section 4.5 Conclusion

This chapter has answered the research questions of this thesis by presenting the findings obtained from Stages 1 and 2 of the research study. It has examined these questions at the micro (five individual students in stage one), meso (60 students in stage one), and macro levels (1517 students in stage two), offering an in-depth close up motion capture of individual students' motivational dynamics as well as a wide-angel snap shot of demotivating factors as reported by the larger student body. It has demonstrated how EAP learners' motivational disposition changes frequently as it is affected by a myriad of factors internal and external to the language classroom and internal and external to the language learner. It has presented a model for understanding motivational disposition as an emergent property of a motivational system that interacts with a series of nested systems. It has shown that factors in these systems are often both sources of motivation and demotivation, changing according to time and context. Generally speaking, factors internal to the EAP classroom tended to have a link to positive motivation levels and that sources of demotivation primarily stem from factors outside of the EAP classroom. These findings will be discussed in light of the extant literature in the following chapter.

Chapter 5 Discussion

Section 5.1 Introduction

This chapter discusses some of the major findings reported in Chapter 4 in light of the existing literature on language learner motivational dynamics and demotivation. The first section summarizes the aims, research questions, and methodologies employed. The chapter then recapitulates the major findings of the study and discusses how these findings relate to the literature. Lastly, it discusses the feasibility of leveraging a CDST approach to researching language learner motivation.

Section 5.2 Summary of Aims, Research Questions, and Research Methodologies

Arising from the pedagogical need to better understand EAP learners' motivational dynamics in the context of TNE, this study adopted the following research objectives: (1), to investigate the dynamics of motivation of EAP learners at a TNE EMI university; (2), to identify the salient motivating and demotivating factors influencing these dynamics in motivation, (3), to explore the feasibility of using CDST in studying motivation, and (4), to design and utilize new methodological instruments, thereby contributing to the current and ongoing efforts to understand how best to research the complex and dynamic nature of language learner motivation.

In order to achieve these objectives and to guide the research methodology, the study focused on the following research questions:

1. How does the motivation of EAP learners at a TNE EMI university change over the course of a semester in their first year?

2. What are the salient motivating factors for these students?

3. What are the salient demotivating factors for these students?

Two stages of research using a mixed methodology were conducted in order to address these questions. In the first stage a motion capture picture of 60 students' motivational dynamics was taken by means of a motivation questionnaire, motivation journals, semi-structured interviews, and focus group discussions. The motivation questionnaire measuring motivation constructs (i.e. Ideal L2 Self, Instrumentality) was administered twice, at the onset and conclusion of a 10-week period. A t-test provided insights into potential changes in these motivational constructs. The data from the questionnaire, journals, interviews, and focus group discussions were triangulated to explore trends in how motivational disposition of students changed over 10 weeks, as well why these trends occurred. Salient demotivating and motivating factors were identified by means of analyzing the results of matrix coding queries that indicated the various frequencies and strengths of demotivating and motivating factors. In the second stage of the research, the salient demotivating factors were further explored by means of a demotivation questionnaire that was administered to the larger student population (n=1517). This demotivation questionnaire explored how frequently various factors were found to be a source of demotivation for the students. A summary of the major findings from these two stages of research will be given in the next section.

Section 5.3 Summary of Major Findings

With regard to the first research question, 'How does motivation of EAP learners at a TNE EMI university change over the course of a semester in their first year?' it was

found that learners' motivation was complex and multifaceted, changing dynamically across time and according to context. Motivation constructs frequently used in previous L2 motivation studies (e.g. L2 self guides, instrumentality, etc.) were relatively stable for most students. Motivational disposition, or students' willingness to expend effort to learn at any given moment, however, changed frequently and, often, drastically between motivated and demotivated states. While evidence was found that motivation constructs had an influence on students' motivational disposition, they alone were not sufficient to account for the changes in students' motivational disposition from day to day.

Rather, it was found that motivational disposition emerges from the complex and non-linear interaction of a myriad of factors internal and external to the language learner and language classroom. External to the language learner are a series of systems, each with their own internal components. These are the language classroom (e.g. the teacher, materials, groupmates, classmates), the larger university context (e.g. other modules or classes, assignments, teachers, clubs), students' lives outside of university (e.g. friends, family, work), and the larger cultural and environmental context (e.g. China, the climate and weather). These external factors exerted an influence on the internal motivational system, which is comprised of factors such as affect, cognition, and motivation constructs. The influences that these external factors exerted on the internal motivational system were amplified or dampened by students' overall well-being, including their physical and emotional or mental health. Students' well-being therefore played a crucial role in the shaping of their motivational disposition. It was found that motivational disposition then arose from the internal motivational system. Students' action or inaction affected themselves and

others around them, thereby establishing a feedback loop by which the learner is both affected by and having an effect on others in the learning context.

Factors internal and external to the language learner, as well as internal and external to the language classroom served as both sources of motivation and demotivation. In other words, a definitive list of concrete demotivators and motivators could not be established. This is because these internal and external factors exerted influences of different strengths on motivational disposition according to time and context. The same factor exerted various influences on different students' motivational disposition. In addition to this, the same factor exerted various influences on the same student's motivational disposition at different times and in different contexts. Using CDST terminology, motivational disposition was found to be sensitive to initial conditions, and that the relationship of factors in the various systems related to motivation was non-linear.

In regard to research questions two and three, which ask what the salient demotivating and motivating factors are for these students, while a concrete list of demotivators and motivators could not be generated, a list of sources that frequently served as sources of demotivation and/or motivation was possible to be generated. Factors that frequently served as sources of demotivation to many students include assignments, deadlines, and exams that relate to other classes; as well as negative moods and emotions; poor physical health; friends; entertainment; and going on vacation. Factors that were frequently a source of motivation to many students include assignments, deadlines, and exams that relate to EAP classes, as well as positive moods and emotions, desiring to improve, desiring to be prepared for class,

the time and day of EAP class, having enough time to focus on EAP, making

significant progress on assignments, EAP teachers, being in a good physical

condition (e.g. getting enough rest), and receiving good marks. It was therefore

found that sources of demotivation were frequently associated with factors outside of

the EAP classroom and sources of motivation were frequently associated with factors

inside the EAP classroom.

In addition to exploring these research questions, this study attempted to explore the

feasibility of using CDST in studying motivation. Two findings are noteworthy.

First, a CDST informed research methodology to investigate motivational dynamics

was challenging but feasible. CDST offered a powerful apparatus for understanding

motivational dynamics; the trouble of triangulating research methods, time, and data

was well worth it. Second, it was found that principles of CDST and characteristics

of CDSs (e.g. evidence that motivational disposition is an emergent property of a

system, that motivational disposition is sensitive to initial conditions) can be

grounded in actual data. Having summarized the major findings, the next section will

discuss some of the most important and/or surprising findings in light of the current

literature.

Section 5.4 Discussion of Major Findings

At a general level, the finding that motivation is complex, multifaceted, and changes

dynamically across time and according to context is in line with recent L2 research

(Kikuchi, 2017; Dörnyei, MacIntyre, et al., 2015b; Waninge, 2014; 2015; Ushioda,

2009). This view of motivation is perhaps best summarized by Ushioda's (2009)

person-in-context relational view where there is

a focus on real persons, rather than on learners as theoretical abstractions; a focus on the agency of the individual person as a thinking, feeling human being, with an identity, a personality, a unique history and background, a person with goals, motives and intention; a focus on the interaction between this self-reflective intentional agent, and the fluid and complex system of social relations, activities, experiences and multiple micro- and macro-contexts in which the person is embedded, moves, and is inherently part of…we need to take a relational (rather than linear) view of these multiple contextual elements, and view motivation as an organic process that emerges through the complex system of interrelations. (p. 220)

The data presented in Chapter 4 support Ushioda's assertion that motivation is an organic process that emerges through the complex system of interrelations. It is also in line with recent investigations of L2 motivation that are guided by CDST principles (Dörnyei, MacIntyre, et al., 2015b).

The finding that many of the contextual factors influencing students' motivation were closely related to students' cognition, affect, and motivation constructs (e.g. Ideal L2 Self), for example, echoes the findings of Waninge's (2015) study. She found that cognitive, motivational, affective, and contextual elements served as the underlying attractor basin, influencing the system towards a particular attractor state. The model of motivational disposition as an emergent property of internal and external nested systems, which I presented in section 4.2.11.9, includes these same elements. It must be noted, however, that Waninge only investigated contextual factors related to learning that occurs in the language classroom.

I believe, however, that factors external to the language classroom should not be overlooked because of their potential to serve as both sources of motivation and demotivation. The finding that factors external to the language classroom can

influence learner motivation is supported by Kikuchi's (2017) study. Kikuchi claimed that students "may become demotivated by curriculum constraints such as the change of teachers or *their social life outside the classroom*" (p. 142, emphasis mine). In his investigation of the motivational dynamics of five university freshmen, Kikuchi found that these students' motivation to study was affected by their part-time jobs, club activities, and problems in personal relationships. The data of the current study, however, demonstrate that students experience many motivating and demotivating factors external to the classroom in addition to the ones highlighted by Kikuchi.

Unfortunately, many studies on motivation and demotivation do not take into consideration factors external to the language classroom. Li and Zhou (2017), for example, who examined demotivation of Chinese university students learning English, based their study on demotivating factors identified by Dörnyei (2001). The nine factors Li and Zhou explored were (1), the teaching material, process, and content; (2), significant others; (3), teaching competence and attitude of teachers; (4), the relationship between teachers and students; (5), teaching facilities and teaching environment; (6), lack of intrinsic interest; (7) experiences of failure and lack of confidence; (8) having no clear study goal.

This highlights a significant problem with studies on motivation: the instrument design leads participants to particular answers while excluding others. When researchers investigating demotivation design questionnaires that contain a substantial number of items related to the teacher, it is unsurprising that many studies report results that suggest that teachers are the primary source of demotivation for

language learners (see for example Song & Kim, 2017; Oxford, 1998; Oxford 2001; Ushioda, 1998; Kikuchi, 2009; Carpenter et al., 2009). In contrast, I have found that students identified many sources of demotivation and that these sources are generally related to phenomena external to the language classroom. Teachers were not high on the list of salient demotivators. This suggests the need for researchers to consider the limitations of questionnaire-based instruments where the range of possible demotivating and motivating factors experienced by the student participants has been predetermined by the researcher based on the findings of previous studies that only investigated factors internal to the classroom. Indeed, some of the major findings of the current study were only discoverable because of the triangulation of research methods employed that afforded participants the ability to report on their experience in a timely manner before the details and nuances of their motivation faded with their memory.

One such finding is that a particular learner can be influenced by a factor in different ways at different times because the contextual conditions are never exactly the same. This is a significant discovery that came about because of the research methodology employed. Consider the data from Student A14 and how playing football affected his motivation in different ways (see section 4.2.11.4). The student wrote in his motivation journal three times in the same week about how playing football affected his motivation in different ways. The student was able to capture this level of detail because he was reflecting daily on his motivation and recording it. Had a research design been used where the student reflected only once at the end of the semester, it is unlikely that the student would be able to recall how a particular activity (in this case playing football) affected his motivational disposition on a given day.

Compare the daily reflections employed in the current study with Kikuchi's (2017) research design. The 20 participants in Kikuchi's study reflected on their motivation only seven times over an eight-month period. It stands to reason that a research design with data collection points spread out over the span of almost a year would make it difficult for students to be able to recall all the details and nuances of their motivational dynamics from day to day, as well as to remember the plethora of contextual factors that affect their motivation on a daily basis. This is why I opted to employ motivation journals which invited students to reflect on their motivational disposition on a daily basis.

While Kikuchi and I both found that the same factor can influence students in different ways, the finding that the same factor can influence the same student in different ways only surfaced in my study. This is likely because of two reasons. First, as has been pointed out earlier, is the frequency of sampling. Whereas the participants in Kikuchi's study reflected on their motivation a total of seven times over a period of eight months, participants in the current study were asked to reflect 70 times in a 10-week period. Second is the time between when a student is affected by a motivational factor and when the student recalls and reflects on the experience. It stands to reason that participants will be better able to remember the details of an experience if the time of reflection does not lag too far behind. In other words, immediacy of reflection and recollection is critical, especially in regard to capturing the details of the initial conditions of the learner that the learner's motivational disposition is sensitive to. This suggests that a detailed picture of why motivation

changes cannot be obtained without frequent sampling, instrumentation that permits reflection and open answers, and immediacy in recollection of experience.

I have heretofore attempted to draw attention to the importance of understanding the role of factors external to the language classroom, as well as the need to utilize research designs and instruments that afford the ability to capture the details and nuances of motivational dynamics and the myriad of factors, internal and external to the language learner that influence motivational disposition. In the remainder of this chapter I will discuss two more significant findings: the importance of understanding students' overall well-being as a key component of the L2 motivation system, and the possibility of generating a list of motivational factors according to their frequency, strength, and polarity. This will subsequently be followed by a brief discussion of this study's research objective of exploring the feasibility of leveraging CDST for researching L2 motivation.

One of the findings of the current study that stands out amongst the literature reviewed in Chapter 2 on demotivation and language learning is the finding that students' overall well-being appears to act as a filter that amplifies or dampens positive and negative feedback from other factors in students' lives. When employing the term well-being I follow the American Psychological Association's definition: "a state of happiness and contentment, with low levels of distress, overall good physical and mental health and outlook, or good quality of life" ("well-being," 2020). The finding that students' well-being may amplify or dampen feedback from other contextual factors can be compared to Maslow's (1943) hierarchy of needs, which presents physiological and safety needs as being basic foundations that must

be met before higher level needs such as love, belonging, esteem, and self-actualization can be realized. The results of the current study do not indicate that physical and emotional well-being are absolute prerequisites for motivation to study EAP. Students, despite being ill, can still choose to power through the symptoms of their illness and make progress on completing assignments. Jack's experience, which was reported in section 4.2.5, is one such example. In most cases, however, students' motivational disposition is worse when they are in poor emotional or physical states and better when they are in good emotional or physical states. Emily's struggles with depression (see section 4.2.8) is an example of this.

In my view, physical and emotional well-being play crucial roles in shaping the trajectory of the motivational system and its emerging motivational disposition because they are essentially the initial conditions of the learner. Humans are entities comprised of various dynamics systems, systems that make up our biology and psychology. The motivational system appears to be connected to, and to some degree dependent on, these biological and psychological systems. The conditions of the biological and psychological systems at the moment that the internal motivation system receives input from external factors is frequently in flux as these biological and psychological systems are themselves also dependent on internal and external resources. The strength and influence of the same external factor therefore is changed depending on the conditions of the biological and psychological systems. Input that would normally influence the motivational system to arrange in such a way that a positive motivational disposition emerges could be drastically dampened depending on the conditions of the biological and psychological systems of the learner. For example, a particular classroom activity that a student would normally find engaging

may not lead to interest and participation if the student has recently not been sleeping well due to having broken up with her boyfriend. Because the biological and psychological systems are in disarray, the motivational system is unable to settle into a stable attractor state that leads to interest and participation. In short, the initial conditions of the biological and psychological systems appear to be a major reason for the non-linear relationships that exist in the L2 motivational system. While Maslow's (1943) hierarchy of needs is nearly 80 years old, perhaps it is time to reconsider its relevance today, albeit through a CDST lens that examines the multiple nested systems that make up the human experience and their interconnected nature.

Another significant finding that merits further discussion is that it is possible to generate a list of factors that frequently serve as salient sources of demotivation and/or motivation. It is likely that Kikuchi (2017, 2015, 2011, 2009) has contributed more to the field's understanding of demotivation of language learners than any other scholar. After conducting what may be the very first study on demotivation from a CDST perspective, Kikuchi (2017) claimed that "each learner interacts with contextual factors differently and it is simply not possible to identify what motivates or demotivates all the learners" (p. 142). While I agree with Kikuchi that creating a concrete list of motivators and demotivators for *all* learners may not be possible, I contend that it is within researchers' means to identify patterns and trends in the way that factors are affecting students generally. This study has demonstrated how through frequent sampling and the coding of subsequent qualitative data it is possible to generate lists of demotivating and motivating sources by looking at the frequency, strength, and polarity of these motivational factors (see section 4.3).

Perhaps what is needed is a paradigm shift in demotivation research. Dividing motivational factors into clear cut categories such as motivators and demotivators does not reflect the complex reality of the L2 motivational system. As this study has found that motivational factors can be both motivating and demotivating (even for the same student at different times!), the traditional black and white view of motivational factors should be abandoned. Kikuchi's (2015) concept of demotivation and demotivators (see figure 2.11 at the end of 2.6.1), for example, is too simplistic. In its stead a more nuanced understanding of the *range of influences* that motivational factors can potentially have on motivational disposition should be adopted. Along with this paradigm shift it may be wise for demotivation researchers to modify the way motivational factors are talked about. Instead of using the words 'demotivators' and 'motivators' it may be better to address them as motivational factors. When more specificity is needed, perhaps 'factors serving as sources of demotivation' or 'factors exerting a negative influence on motivation' would be suitable. The point here is that if researchers are not careful with the terminology they use to describe motivational factors then they may be inadvertently contributing to the perpetuation of the incorrect conceptualization of motivational factors as fitting into a motivating/demotivating dichotomy. Should researchers continue to use the terms 'motivators' and 'demotivators' then they should at least acknowledge that such factors may change in strength and polarity as changes in context occur.

Perhaps the most important finding of the current study is the evidence from students' own words that CDST is a valid conceptual framework in the context of language learner motivation. While previous articles and studies have adopted CDST principles and a CDST framework for understanding language learner motivational

dynamics (e.g. Henry, 2015; Waninge, 2015; Kikuchi, 2017), the current study

contains evidence suggesting that such principles and theory have validity and can be

grounded in actual data (see section 4.2.11). A detailed model of the motivational

system with motivational disposition as an emergent property has been described in

section 4.2.11.9. The current study not only leverages a CDST perspective to

interpret data, but, because the data contains evidence that an L2 motivational system

exists and that it has all the characteristics of CDSs (e.g. nonlinearity, complete

interconnectedness, emergent properties), the study also serves as a justification as to

why a CDST approach to understanding language learner motivation is valid and

merited. Given the evidence provided in section 4.2.11 that characteristics of CDSs

can be found in regard to language learners' motivational disposition, this current

study has completed one of its major research objectives - exploring the feasibility of

using CDST as a conceptual framework for studying motivation. It has demonstrated

that through research methods, data, and time triangulations, an in-depth motion

capture picture of motivational dynamics can be taken that allows for the

identification of the frequency, polarity, and strength of a diverse array of factors

internal and external to the language learner and language classroom. While such an

endeavour is feasible, it certainly is not without its challenges.

One of these challenges of conducting CDST guided research, as reported by others,

is how systems, subsystems, and components of systems are interconnected. As de

Bot & Larsen-Freeman (2011) put it: "How can you study a system and its

subsystems when everything is interconnected?" (p. 11). I contend, however, that the

question posed by de Bot and Larsen-Freeman is only problematic if one is unwilling

to give up a traditional reductionist approach to SLA research. Rather than finding

interconnectedness as posing a difficulty, I found the interconnectedness of the system components and nested systems to be helpful in understanding the non-linear relationships within such systems. When a researcher is interested in understanding the emergent property of flocking birds (a particular flocking pattern), it makes little sense to examine only one component of the system in isolation (i.e. one bird). It is imperative to view the system as a whole made up of interconnected components. Likewise, the effect that a particular motivational factor has on motivational disposition is made clearer when other interconnected systems or system components are considered. When a student reports that they are in a good motivational disposition because they feel invigorated from playing a football match, what exactly is behind the increase in motivation? Was it the physical exercise? The emotional elation from winning the match? A feeling of accomplishment from performing well during the match? It could be any or all of these reasons. In short, the embracing of a complexity view, including the interconnectedness of systems and system components, was found to be liberating, not debilitating.

Indeed, the interconnectedness of systems and system components is a major reason why systems are unpredictable. Systems are continually reorganizing based on internal feedback and input from new factors. Given that these relationships are nonlinear and changing all the time (e.g. playing soccer has different effects on motivational disposition at different times due to differences in contextual factors), it is impossible to mathematically model the relationships of so many factors as they change according to time and context.

The nonlinear and unpredictable nature of CDSs pose a challenge to some researchers. Experts on CDST and SLA, de Bot and Larsen-Freeman (2011) phrased the issue this way: "If the process [of development] is nonlinear, how is it possible to make any predictions that are likely to holdup?" (p. 18). The short answer is that iterative patterns of the system can be identified but predictions of exact outcomes cannot be made. This is because the initial conditions of the nested systems and system components are never the same. Consider how the current study used 1244 different codes to describe the various factors that students attributed to as having a major influence on their motivational disposition. As CDSs are open and nonfinal there is no end to the number of contextual factors that can shape motivational disposition. There is no finite number of initial conditions that can be observed and categorized. It is not possible to take all relevant factors into account. Yet, patterns can be identified to help us understand system dynamics (e.g. the role that poor physical health has in lowering motivation levels). To be brief, the question posed by de Bot and Larsen-Freeman is only a problem if the researcher is adhering to the reductionist approach that has long dominated SLA research.

In my opinion, a reductionist approach to understanding complex and multifaceted phenomena, such as L2 motivation, can only provide an illusion of understanding; a distortion and oversimplification of what is actually occurring. Larsen-Freeman (2012, p. 212) aptly summarized both the problem with and price paid for adhering to a reductionalist/rationalist perspective:

> Not only is it a problem in our modern world that we fail to recognize and respect our interdependence, it is also a problem that we do not appreciate the complexity of the world we live in… The price we pay for clinging to a modernist rationality can be seen on many levels in our interdependent,

complex, globalized world. Perhaps the most important one is the distortion it brings to our understanding of what it is to be human. As Horn (2008:140) writes, 'In attempting to make the human sciences objective, the human became turned into an object'. Thus, the ultimate promise of CT/DST is to 'help us to humanize science, not the other way around.' (Cilliers 2008:50)

As I see it, reductionist approaches to understanding motivation tend to lead to oversimplified classifications of learners (demotivated/motivated learners) and motivational factors (demotivators and motivators). CDST perspectives, on the other hand, affords researchers with a powerful apparatus for understanding learners and the language learning process more holistically.

While I found researching L2 motivation from a CDST perspective to be challenging, it was not so because of the reasons mentioned above. The research endeavour was challenging because of the use of a CDST informed research methodology that leveraged multiple research instruments at different times in order to allow for the triangulation of methods, time, and data. The need to design or adapt multiple research instruments and ensure that each instrument is taking valid and reliable measurements adds layers of complexity for the researcher. Other researchers who have leveraged CDST principles and research methodologies for investigating language learner motivation have expressed having a shared mutual understanding of the substantial challenges of using a CDST approach to researching motivation (Dörnyei, MacIntyre, et al., 2015a). Yet despite these challenges many agree that "once a researcher understands the complexity worldview, in a sense there is a transformation in thinking… nothing of SL classroom phenomena – is nothing if not complex and dynamic. This understanding leads to the conviction that there are certain things that can only be uncovered from a dynamic systems perspective" (Hiver, as cited in MacIntyre, et al., 2015). Ultimately, however, it is my opinion that

due to the complexity of research design required for a CDST approach, it may continue to remain an "alternative approach" (Atkinson, 2011, p. 16). Indeed, in today's world where academics must "publish or perish", the complexity of CDST research and the time required to complete it may deter *some* researchers from engaging with it, despite its affordances. As MacIntyre, et al. (2015) put it, "although a road that may not be widely travelled, DST is not a cul-de-sac" (p. 428).

Section 5.5 Conclusion

This chapter has discussed the meaning and significance of the findings of the current study in regard to the existing literature. It has summarized the research objectives and questions guiding the study, summarized the study's major findings, and discussed the feasibility of conducting CDST guided research on language learner motivation. The following chapter will serve as a conclusion for the thesis.

Chapter 6 Conclusion

Section 6.1 Introduction

As a conclusion to this thesis this chapter summarizes the research project and evaluates the importance of the study by considering its significance in the areas of theory, methodology, and practice. It also describes the project's limitations and offers recommendations for further research.

Serving as the impetus behind this study were two questions stemming from my reflection as a teacher in the pedagogical context of teaching EAP at a TNE university in Mainland China. These questions are: *How can students' motivation to attend and participate in EAP courses drop so low, considering the importance that academic English skills and vocabulary likely have for students' success in their studies at a TNE EMI university? What if anything can be done to improve the situation for students and teachers?*

With the aim of finding answers to these questions, this study set out to achieve the following research objectives: (1), to investigate the dynamics of motivation of EAP learners at a TNE EMI university; (2), to identify the salient motivating and demotivating factors influencing these dynamics in motivation; (3), to explore the feasibility of using CDST in studying motivation; and (4), to design and utilize new methodological instruments, thereby contributing to the current and ongoing efforts to understand how best to research the complex and dynamic nature of language learner motivation.

In order to achieve these objectives and to guide the research methodology of the study, the following three research questions were adopted and addressed:

1.   How does the motivation of EAP learners at a TNE EMI university change over the course of a semester in their first year?

2.   What are the salient motivating factors for these students?

3.   What are the salient demotivating factors for these students?

It was found that learners' motivation was complex and multifaceted, changing dynamically across time and according to context. While motivation constructs (e.g. L2 self guides, instrumentality, etc.) were relatively stable for most students, their motivational disposition (i.e. willingness to expend effort to learn at any given moment), changed frequently between motivated and demotivated states. Motivation constructs had an influence on students' motivational disposition but did not, on their own, account for the changes in students' motivational disposition from day to day.

Evidence was found that suggests that motivational disposition emerges from the complex and non-linear interaction of an array of factors internal and external to the language learner and language classroom. These factors served as both sources of motivation and demotivation. It was not possible to create a concrete list of motivators and demotivators because these factors exerted influences of different strengths on different students' motivational disposition according to time and context. It was even found that the same factor could have varying influences on the same student at different times, owing to changes in the initial conditions or context of the language learner. Motivational disposition was therefore found to be sensitive

to initial conditions, with the relationship of factors in the various systems related to motivation being nonlinear (the same input does not equate to the same output). Students' physical and emotional well-being were found to be critical elements in understanding the motivational system's dynamics, including the nonlinear relationships that existed between factors external and internal to the language learner. This is because the initial conditions of the learner are closely connected to the physical and emotional states of the student. Their overall well-being amplified or dampened the influence that external factors had on elements of the internal motivational system.

Based on these findings, a CDST lens was adopted to generate a model (see section 4.2.11.9) for understanding motivational disposition as an emergent property of an internal motivational system and its relations with other systems (e.g. the language learning classroom, other aspects of the university, the students' lives outside of university, and the larger cultural and environmental contexts).

While a concrete list of dichotomous factors (demotivators and motivators) could not be generated, a list of elements that frequently served as sources of demotivation and/or motivation was possible to be generated. Factors that frequently served as strong sources of demotivation to many students include assignments, deadlines, and exams that relate to other classes; as well as negative moods and emotions; poor physical health; friends; entertainment; and going on vacation. Factors that were frequently a source of strong motivation to many students include assignments, deadlines, and exams that relate to EAP classes, as well as positive moods and emotions, a desire to improve, a desire to be prepared for class, the time and day of

EAP class, having enough time to focus on EAP, making significant progress on assignments, EAP teachers, being in a good physical condition (e.g. getting enough rest), and receiving good marks. Sources of demotivation were frequently associated with factors outside of the EAP classroom and sources of motivation were frequently associated with factors inside the EAP classroom.

In regard to the research objective of exploring the feasibility of using CDST in studying motivation, a CDST approach proved challenging but feasible. CDST offered a powerful apparatus for understanding motivational dynamics. Evidence was found that suggest that characteristics commonly associated with CDSs apply to L2 motivation and can be grounded in actual data. It was found that motivational disposition is an emergent property of a motivational system, that motivational disposition is sensitive to initial conditions, that relationships between system components and nested systems are nonlinear, and that the motivational system is open and nonfinal. The data also provided evidence that other characteristics of CDSs are also present in the motivational system.

Section 6.2 Contributions of the Study

While it is not always easy to determine the significance and impact of a research project as it takes time for the findings to be disseminated and discussed by members of the academic community, this section will highlight what may be the study's greatest contributions and subsequent implications in regards to SLA theory, research methodology, and pedagogical practice.

Section 6.2.1 Contributions to Theory

While nonlinear dynamic systems were introduced to the field of SLA by Larsen-Freeman (1997, 2002) over 20 years ago, the leveraging of CDST to research language learner motivation has only picked up steam in the past five or six years. During this time, there have been a growing number of empirical studies, each varying in how CDST has been applied to understanding language learner motivation. The current study contributes to the ongoing electric discussion of CDST and motivation, and does so in significant ways.

To begin with, the current study presents a new CDST informed model of language learner motivation. Central to this model is motivational disposition (i.e. the students' willingness to expend effort to learn at any given moment), which emerges from interactions of factors internal and external to the language learner and language classroom (see section 4.2.11.8). The model describes how a feedback loop is formed as students decide how to act (or not act) based on their motivational disposition, which in turn affects themselves and others around them (section 4.2.11.9). A critical component of this model is the finding that students' overall well-being can amplify or dampen the influence that external factors have on the students' motivational disposition. This was made evident, for example, from individual case studies of students such as Jack and Emily, who respectively experienced poor physical and emotional conditions (see sections 4.2.5 and 4.2.8). The introduction of motivational disposition as an emergent phenomenon of a motivational system and related nested and non-nested systems, the comprehensive model of how motivational disposition changes as a result of internal reorganization,

and the finding that well-being can amplify or dampen system feedback are all significant contributions to the literature (section 4.2.11.9).

The model of motivational disposition as an emergent property of internal and external nested systems, presented in section 4.2.11.9, serves as a comprehensive model that adds to other theoretical CDST informed models of motivation (see for example Mercer (2015); Waninge (2015), and Henry (2015)). Grounded by evidence in actual data, the model is more comprehensive than previous models, serving as a visual representation and augmentation to Ushioda's (2009) person-in-context relational view. Ushioda (2015) has recently called for a CDST approach that can account for internal and external processes that affect motivation, something that this study has accomplished:

> What seems important…is to ensure that, when we try to conceptualize 'context' in relation to the language learner within a CDST approach, we endeavour to think big and small at the same time. Or to put it another way, we shuttle between learner-external and learner-internal contextual processes, as our analytical lens shifts from looking globally at particular learners engaging with the surrounding environment, to homing in on particular psychological or behavioural processes within the person. The research challenge is to describe interactions among internal contextual processes as well as contextual processes in the external environment. As our analytical perspective shifts from the external context… and drills down into the internal context… we deepen our understanding of the person, their motivation and behaviour, and the interconnected contextual factors involved. (p. 53)

The current thesis has achieved much of this. It has mapped out nested and non-nested systems external to the learner as well as internal to the language learner. It has described the interaction between these nested systems and their system components. In doing so it has highlighted the importance of students' well-being as

a filter that amplifies or dampens system feedback. It has found that factors external to the language classroom tend to serve as sources for demotivation and factors internal to the language classroom tend to serve as sources of motivation. It has also found that internal theoretical constructs of motivation (e.g. L2 self guides, instrumentality) are not enough on their own to account for changes in motivational disposition. It has underscored the need to reconsider the way we think about the wide range of demotivating and motivating factors that students are experiencing.

The finding that motivational factors can serve as both demotivators and motivators (section 4.3) suggests that researchers need to move away from a binary way of thinking about these demotivating and motivating factors. While studies in the past have attempted to identify lists of factors that can be classified as demotivators or motivators, the current study suggests that a more complex and fluid understanding of motivational factors is merited. This thesis has shown how factors can change in their frequency (how often they are influencing students' motivation), strength (to what degree they are influencing students' motivation), and even polarity (whether they are affecting motivation in a positive or negative way). This means that factors can be demotivating and motivating on different occasions, subject to changes in the learner's context. Because of these findings it is necessary to cease conceptualizing and writing about motivational factors as fitting into a demotivating/motivating dichotomy.

Lastly, while many studies have employed CDST principles into their research design or used CDST as a metaphor for understanding dynamics related to motivation, the current study provides empirical evidence that such principles or

characteristics of CDSs are valid and can be grounded in actual data. The data

suggest that (see section 4.2.11.9):

- motivational disposition is emergent, without a central controller
- students' motivational disposition to study in class each day is sensitive to initial conditions
- motivational disposition is iterative (the present level of development depends critically on the previous level of development) and that it changes frequently, only temporarily entering stable phases
- motivational disposition is dependent on internal and external resources
- motivational disposition is nonlinear in development as system components are highly interconnected and reorganize as changes occur in the environment.

The study therefore provides evidence that suggests a CDST approach to

understanding language learner motivation can be and is justified by actual data.

Section 6.2.2 Contribution to Research Methodology

This study has answered the calls of others to leverage multiple methods to research

motivation and demotivation (Chong, Renandya, & Ng, 2019; Li & Zhou, 2017;

Kikuchi, 2017). The current study has demonstrated how multiple methods can be

used at multiple time points with a large enough sample to adequately capture both

the dynamics of motivation and motivational factors. It provides an example as to

how to it is possible to generate a list of salient sources of motivation and

demotivation that allows for an understanding of how these sources are affecting

students generally, with the recognition that such a list is not definitive as factors can

change how frequently they affect motivation, to what degree they affect motivation,

and in what manner they affect motivation (positively or negatively), as changes in

context occur. This study implies that it is crucial to (1) conduct frequent sampling of

the participants and (2) ensure minimal time has passed between the time when

students recollect motivating/demotivating experiences and the actual time of those

experiences. Without frequent sampling, researchers are more likely to end up catching fewer motivational factors in their research net. If there is not a sense of immediacy in students' recollection of experiences with demotivating/motivating factors, then the researcher is less likely to capture the nuances and details of how those motivational factors influence motivational disposition.

The study also contributes to the field by adding several research instruments to the research tool shed of researchers interested in L2 motivation, especially in the EAP/TNE context. These instruments include motivation journals, a motivation questionnaire, and a demotivation questionnaire. The motivation journals serve as a method to explore motivational dynamics and motivational factors, with minimal time passing between experience and recollection. They allow for the collection of both quantitative data (motivational disposition levels), as well as qualitative data (reason why students selected a particular disposition levels).

The motivation questionnaire is an adaption of a questionnaire used by Taguchi, Magid, and Papi (2009) to measure various motivation constructs (e.g. L2 self guides, instrumentality). The questionnaire used by Taguchi, Magid and Papi has been considered by scholars as being a "rounded, robust measure of learners' motivation" (Dörnyei, as cited in Kikuchi, 2017, p. 132). As far fewer studies have investigated motivation in the EAP context (especially the EAP TNE context) than in general language learning contexts, there are few instruments tailored for the EAP context. Many existing questionnaires on motivation are not suitable for the EAP TNE context because the language of the items can be ambiguous in a setting where English is used as the medium of instruction for EAP classes as well as all other

classes. As such, the adaptation and validation of this motivation questionnaire in the EAP TNE context is an important contribution, allowing researchers more easily to explore this area.

The demotivation questionnaire that explored frequent sources of demotivation with the larger student body is also a significant contribution. Many studies on demotivation rely on demotivation questionnaires that only explore the language learning classroom and factors internal to the language learner (e.g. confidence). This study found, however, that a myriad of external factors, including many outside the language classroom, serve as sources of demotivation for language learners. The study therefore implies that if existing demotivation questionnaires that only investigate factors internal to the language classroom and learner are used, then a large part of the picture of demotivation is being excluded from the research. The new demotivation questionnaire used in this study was designed based on the qualitative data collected from journals, interviews, and focus group discussions to explore salient sources of demotivation, including factors external to the language classroom, thereby demonstrating its construct validity. The questionnaire has been piloted and administered in its final form to large student population (n=1517); in both the pilot and final administering of the questionnaire it was shown to be a reliable instrument.

These research instruments, which were shown to be valid and reliable in the current study, are now available for other researchers to use for their own purposes and in their respective contexts.

Section 6.2.3 Implications for Pedagogical Practice

The current study has implications for pedagogical practice as well. A CDST model of motivation, such as the one presented in this thesis, can serve as a valuable framework for approaching and reflecting on language teaching in the classroom. Consider, for example, how understanding motivational disposition to be an emergent property of a CDS may guide language teachers in understanding and reacting to what is happening in the classroom. There would be no labelling of students as being demotivated or motivated as every students' motivational disposition is dynamic. Students' motivational disposition is dynamic because of changes in initial conditions. The same lesson conducted at different times could be found to have different levels of effectiveness because of changes in these initial conditions. If a teacher were to consider these initial conditions, the teacher might identify how their teaching should be adapted. For example, if class is being held at 1 p.m. students might be feeling sleepy after just having lunch. If the teacher recognizes this, they could reorganize their lesson plan or adapt activities in such a way that allows for students to get up out of their seats and moving around the classroom early in the lesson.

In many ways the adoption of a CDST framework for understanding motivation in the language learning classroom may lead to teachers being more aware of and focused on the needs of individual learners. If initial conditions of the learner affect student motivation and subsequent action, then focusing on lesson plans or teaching material alone would be insufficient. Rather, teachers should put themselves in the shoes of their students. They should ask themselves at the beginning of class 'As a student how might I be feeling? How many classes have I attended today? How tired

am I? Am I hungry? How many exams do I need to prepare for next week? How many assignments do I have due this week?' Language teachers might draw students' attention to these initial conditions, acknowledge them, and then explain why today's lesson is important and why it merits effort on the part of the students. Individual students' physical and emotional or mental well-being should be considered, especially in settings such as the current study where many freshmen struggle as they transition from a Chinese high school to a TNE university.

While teachers may never have the power to determine in the end what students learn in the classroom, by understanding the learning that occurs in the classroom as a CDS, then they can attempt to introduce new elements and stimulus into the system that has the potential to steer it to a desired direction. While students' motivation can not be controlled by teachers, teachers can recognize when students' motivational disposition is poor and then perturb the motivational system from its current attractor state by, for example, introducing a new activity.

The study has additional implications for the context of EAP. The data suggest that when it comes to studying EAP many students are instrumentally and extrinsically motivated. Students were frequently motivated by challenging (but not too challenging) assignments. Students became demotivated when there were periods of no assignment to work on or exam to prepare for. This suggests that teachers in the EAP context need to think carefully about the difficulty of the assignments given, as well as the timing of the assignments throughout the semester. Significant gaps of time where students have no assignment should be avoided. Obviously, not all students require assignments before being willing to expend effort to learn. The

evidence from the data that suggests that many students are instrumentally and extrinsically motivated to study EAP is strong enough, however, that EAP teachers should consider the suggestions above.

Lastly, the finding that many students' motivation levels improved with metacognition, or having an awareness of what their motivation levels are and why they are that way, has implications for pedagogy. Many students reported that regularly recording their motivation levels and reflecting on why their motivation levels changed to be useful in two ways. First, it helped them identify what factors were demotivating to them and how often they wasted time on pursuits less important than their studies. This enabled them to make adjustments in their personal lives and schedules in order to improve their motivational disposition to study. Second, many students said that by regularly recording their motivation levels they became more aware of time periods where their efforts had slumped, and, many students feeling guilty about this, became more willing to put in concerted effort into studying. Without regularly reflecting on their motivation levels the students' might have had more sustained periods of demotivation. These findings would suggest that language teachers could use motivation journals, such as the one leveraged in this study, as a pedagogical tool to help students identify negative patterns in their motivational disposition and make plans to avoid or overcome factors that are serving as sources of demotivation. Furthermore, some students commented in their journals that being able to discuss with a teacher the dynamics of their motivation and reasons for becoming demotivated as being motivating. Teachers identifying and discussing motivating and demotivating factors with students who are experiencing

prolonged periods of demotivation may serve as a motivational boon for some
students.

Section 6.2.4 Limitations of the Study

There were several limitations of the study. In an attempt to understand the salient
demotivating and motivating factors experienced by EAP learners in the first year of
their studies at a TNE, this study has attempted to cast a wide net to capture the
diversity of factors, including number, frequency, and strength. It is not possible,
however, to identify all factors affecting students.

Furthermore, the study has attempted to, but not always been able to, identify these
salient demotivating and demotivating factors in 'real time'. That is, instead of
having students at the end of the semester attempt to reflect on the salient
demotivating and motivating factors experienced in the past 14 weeks, the current
study asked students to reflect on their motivation levels daily, with the intention of
capturing more of the nuances and details of students' motivational dynamics and
associated factors. Unfortunately, due to factors such as the scheduling of classes, or
holidays, students would need to, on occasion, reflect on and record their
motivational disposition of one or two days before the time of their reflection.

Another issue worth noting is the abstract nature of motivation, and the limitations
this presents for researching motivation. First, there is the difficulty faced by students
to be able express the complex reality of their motivation in words. It is possible, for
example, that some students equated their motivation with their productivity, thereby
confusing the psychological impetus to work with the completion of work itself.

Second, there is the difficulty faced by the researcher to codify, analyse, and interpret the qualitative data in a way that is representative of students' intended meaning. While every effort was expended to ensure that qualitative data was interpreted correctly (e.g. having multiple people code the data and checking regularly for inter-coder reliability), it is possible that on some occasions human error was made in the process of coding, analysing, and interpreting the data.

Section 6.2.5 Suggestions for Future Research

One of the major challenges of using a CDST approach to researching SLA, is the burden of leveraging multiple research instruments at different times. It can be taxing for all involved, including the researchers, teachers, and participants. The burden for students might be lightened by the use of new technologies, such as smart phone applications. Using a smart phone application as a way to collect data has several potential benefits, one of which is the feasibility of collecting large amounts data. Quantitative survey-based instruments and some qualitative instruments (such as journals and audio recordings of reflections), as well as consent forms and information participation sheets, could all be administered, collected, and stored via the application. Reminders to complete tasks could be sent to participants as needed. While students, teachers, and even researchers might misplace completed questionnaires, journals, or other documents, they are less likely to lose their phone, and even if this occurs the data is not lost as it is would be stored on a server. All data is stored in one location, and researchers are able to access it at any time.

Another advantage of using mobile apps is that it allows for more immediacy in students responses. While in the current study every measure was taken to ensure that there was a sense of immediacy in students' reflections of their motivation

journals, (i.e. no more than a day or two had passed between when students recollected a particular experience and when that experience actually occurred), at times it was not possible for students to reflect on their motivation every single day. This was because of various reasons, such as having class only a few times a week, or students being absent. With a mobile application, however, students could more easily record their experiences every single day, thereby minimizing the amount of time that has passed between experience and recollection.

Another advantage of using a smartphone application to record information is the possibility to record metadata, or data about data. Using the current study as an example, if a student were to use a smartphone application to record their motivation level, the application could record metadata that includes what time the student recorded their motivation level. This would allow for an even more robust analysis; looking at trends in the metadata one could potentially get insights into how the time of day and even the weather (by consulting a record of the weather) may influence motivation. While using a smartphone application for conducting research might be more convenient (once the application is developed) and allow for new avenues of research that explores metadata, a word of caution must be issued regarding the need for such an application to have the security infrastructure to insure the privacy of the individuals using it.

Further studies that leverage a CDST approach to understanding demotivation are called for. Future research might explore the motivational dynamics and relevant motivating and demotivating factors, albeit in a different context. Such studies might shed light on potential patterns in the aggregate data related to sources of

demotivation and motivation. Would a study in a different educational context generate a different list of salient demotivating and motivating factors? Is the finding of the current study that demotivating sources were generally associated by students to be primarily related to factors outside the language classroom unique only to the participants of the current study? Or is it a recognizable pattern that can be found in a variety of language learning classrooms? Also, as few studies have been conducted regarding demotivation and TNE-EMI educational contexts, future studies in this area may be fruitful.

CDST in its various forms (emergentism, dynamic systems theory, complexity theory) is transdisciplinary, its concepts and principles have been used in a variety of fields in both the hard and soft sciences. It is no surprise then that there are differences in the way scholars describe CDSs. MacIntyre et al. (2015) have highlighted that there is some "difficulty in trying to map [CDST] terminology onto our social reality in a meaningful way… This is not a trivial issue because the process of disseminating research requires that all the actors in the field – authors, reviewers, etc. – share at least some common ground" (p. 422). Indeed, in Chapter 2 I have critiqued many authors for using CDST terminology in ways that unfortunately obfuscate the authors' conceptualizations of the learning experience and motivation as CDSs, making it difficult for the reader to understand what exactly is the system and its dynamics. What would prove useful is a, glossary, article, or short book that attempts to harmonize the way CDST terminology is used in the field of SLA. Such a book would ideally address key concepts (e.g. characteristics of CDSs, different methods to investigate CDSs), as well as key terminology (e.g. attractor states, perturbations, system dynamics, etc.). Loewen and Reinders'(2011)

book *Key Concepts in Second Language Acquisition*, may serve as an apt model. It contains definitions of key terminology and concepts, and provides examples as well as references to academic sources where readers can learn more about the topic. Such a resource would be useful for authors and reviewers as they describe and discuss the findings of CDST informed research and its significance.

From a more pedagogical standpoint, one potential avenue of research is the efficacy of using motivation journals by which students record and reflect on changes in their motivation. Many participants in this study commented on the usefulness of regularly recording and reflecting on their motivation levels. Some, however, found the task repetitive. Future research might consider the efficacy of motivation journals and metacognitive strategies in relation to motivational disposition, perhaps modifying the journals used in this study in order to enhance their value as a supplemental tool to enhance motivation levels of students in the language learning classroom.

Section 6.3 Conclusion

To conclude this chapter and thesis, this study has sought to better understand the motivational dynamics and related factors of EAP learners at a TNE-EMI university in Mainland China by using a CDST approach that leveraged multiple methods of data collection in order to triangulate the data and provide and in-depth understanding. The findings suggest that students' motivational disposition to study EAP is an emergent phenomenon arising from a motivational system. Within this system and related nested systems, a diverse array of demotivating and motivation factors internal and external to the language learner and language classroom shape the organization of the motivational system and, subsequently, the trajectory of the

emergent motivational disposition. Such sources of demotivation and motivation share nonlinear relations, and can change in their strength and polarity, given contextual changes in the language learners lives. Physical and emotional well-being are critical components of this system. Closely connected to the initial conditions of the learner, they serve as a filter, amplifying or dampening system feedback. EAP learners, based on their motivational disposition, choose to act or not. These decisions in turn affect themselves and others, thereby establishing a feedback loop. The conceptualization of L2 motivation as being a CDS can be justified by evidence grounded in actual data. These findings are significant to theory, research, and pedagogy as they have implications for each.

It is hoped that the perspective of motivation and demotivation presented in this thesis has afforded the reader with new insights into the questions that served as the study's impetus: *How can students' motivation to attend and participate in EAP courses drop so low, considering the importance that academic English skills and vocabulary likely have for students' success in their studies at a TNE EMI university? What if anything can be done to improve the situation for students and teachers?*

Leveraging a CDST approach to understanding L2 motivation has not been easy. Indeed, in hindsight I find humorous the comments that others have made when conversing with me about my research. A peer of mine once commented about how she did not like CDST because it requires the abandoning of the reductionist perspective that has long dominated cognitive psychology and SLA. Early in my research a supervisor expressed that he felt I was ambitious for investigating motivation from a CDST angle. A well-known scholar who attended one of my

presentations at an academic conference asked me "why would you do that to yourself?", meaning why would you chose such a difficult topic for your PhD thesis.

To that I answer, it is the framework that makes the most sense to me. I have long been hesitant to dive into SLA research because the traditional reductionist approach has always seemed to be impotent in its ability to accurately reflect the experiences I have had as a language teacher and language learner. Explanations regarding language learning and teaching experiences given from research that leveraged the reductionist approach have always seemed to me to be gross oversimplifications of the complexity of reality.

For me, CDST has offered more than insights into language learning motivation; it has altered the way I see the world. It has made me reconsider how I view the development of individuals inside and outside of the language classroom. It has made me reconsider their decision-making processes and role of the contextual environment in shaping those decision-making processes. Instead of seeing individuals I see processes. Instead of seeing failure I see potential. Perhaps that is the real value of CDST; seeing things not as they are now, but rather seeing and understanding the underlying processes that shape what things may become.

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Appendices

Appendix 1 – Final Adapted Motivation Questionnaire

Dear students,

Thank you for participating in my study! As an English teacher, I care a lot about helping students succeed in their studies. This is why as a PhD student I am interested in better understanding student motivation to learn English at XJTLU.

This motivation questionnaire should take 6-10 minutes to complete. This is not a test so there are no right or wrong answers. Your answers will be kept confidential. Please give your answers sincerely.

This study has been approved by the XJTLU Ethics Sub-committee and is conducted by Austin Pack, a Ph.D. student at XJTLU's English department. If you have any questions or concerns you may contact Austin Pack (81884860, austin.pack@xjtlu.edu.cn).

By continuing with the survey below, you acknowledge that you are over 18 years of age and agree to voluntarily take part in this research.

- ○ I agree

- ○ I do not agree

Part 1: Please tell us how much you agree or disagree with the following statements.

	Strongly disagree (1)	Disagree (2)	Slightly disagree (3)	Slightly agree (4)	Agree (5)	Strongly agree (6)
1. I would be happy if other cultures were more similar to Chinese.	○	○	○	○	○	○
2. I can imagine myself speaking English with international friends or colleagues.	○	○	○	○	○	○
3. I have to learn academic English because I don't want to fail my Language Centre EAP class.	○	○	○	○	○	○
4. I can imagine myself speaking English fluently in academic or professional contexts.	○	○	○	○	○	○
5. My family put a lot of pressure on me to study abroad.	○	○	○	○	○	○
6. Most other cultures are backward compared to my Chinese culture.	○	○	○	○	○	○
7. I would like to spend lots of time studying English.	○	○	○	○	○	○
8. I am sure I will be able to write academic English without difficulty if I continue to study.	○	○	○	○	○	○
9. I imagine myself as someone who is able to use English in academic or professional contexts.	○	○	○	○	○	○
10. Studying EAP is important to me because I would feel	○	○	○	○	○	○

ashamed if I got bad grades in
my non-Language Centre classes
that are taught in English.

Please tell us how much you agree or disagree with the following statements.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Somewhat agree (4)	Agree (5)	Strongly agree (6)
11. I can imagine myself working for an international company inside or outside of China where I use English on a daily basis.	○	○	○	○	○	○
12. I believe that I will be capable of reading and understanding most academic texts in English if I keep studying EAP.	○	○	○	○	○	○
13. I have to study academic English because I don't want to get bad marks in my Language Centre EAP class.	○	○	○	○	○	○
14. I have to study academic English because I don't want to get bad marks in non-Language Centre classes that are taught in English.	○	○	○	○	○	○
15. Studying English is important to me in order to bring honour to my family.	○	○	○	○	○	○
16. Studying EAP is important to me because I think I'll need it for further studies.	○	○	○	○	○	○
17. Studying EAP is important to me because English proficiency is necessary for getting a good job.	○	○	○	○	○	○
18. Whenever I think of my future career, I imagine myself using English in academic or professional contexts.	○	○	○	○	○	○
19. I am sure I have a good ability to learn academic English.	○	○	○	○	○	○
20. If I make more effort, I am sure I will be able to master academic English.	○	○	○	○	○	○

Please tell us how much you agree or disagree with the following statements.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Somewhat agree (4)	Agree (5)	Strongly agree (6)
21. Studying EAP is important to me because I would feel ashamed if I got bad grades in my Language Centre EAP class.	○	○	○	○	○	○
22. Studying EAP is important to me because it offers a new challenge in my life.	○	○	○	○	○	○
23. I think that I am doing my best to learn English.	○	○	○	○	○	○
24. My family put a lot of pressure on me to study English.	○	○	○	○	○	○

25. I must study English to avoid being punished by my parents/relatives.	○	○	○	○	○	○
26. It would be a better world if everybody lived like the Chinese.	○	○	○	○	○	○
27. Being successful in English is important to me so that I can please my parents/relatives.	○	○	○	○	○	○
28. If an EAP course was offered in the future, I would like to take it.	○	○	○	○	○	○
29. Other cultures should learn more from my culture.	○	○	○	○	○	○
30. I would like to concentrate on studying English more than any other topic.	○	○	○	○	○	○

Please tell us how much you agree or disagree with the following statements.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Somewhat agree (4)	Agree (5)	Strongly agree (6)
31. I have to learn academic English because I don't want to fail non-Language Centre classes that are taught in English.	○	○	○	○	○	○
32. Studying EAP is important to me because I think it will someday be useful in getting a good job.	○	○	○	○	○	○
33. I am prepared to expend a lot of effort in learning English.	○	○	○	○	○	○
34. I can imagine myself living abroad and having a discussion in English.	○	○	○	○	○	○
35. Studying EAP is important to me in order to attain a higher social status.	○	○	○	○	○	○

Part 2: You're almost done! Just a few more questions!

	Not at all (1)	Not so much (2)	So-so (3)	A little (4)	Quite a lot (5)	Very much (6)
36. How nervous do you get when you are speaking English in your Language Centre EAP class?	○	○	○	○	○	○
37. Do you like meeting people from the international community that speak English fluently?	○	○	○	○	○	○
38. How tense would you get if a foreigner asked you for directions on campus in English?	○	○	○	○	○	○
39. How nervous do you get when you are speaking English in your non-Language Centre, major specific classes?	○	○	○	○	○	○
40. How afraid are you of sounding stupid in English because of the mistakes you make?	○	○	○	○	○	○
41. How much would you like to become similar to the people who	○	○	○	○	○	○

speak English in your chosen profession?

42. How uneasy would you feel using English to communicate with a professor or expert in your chosen profession?	○	○	○	○	○	○
43. Do you find learning academic English really interesting?	○	○	○	○	○	○
44. Do you think it is important to speak English fluently to be accepted as a member of your chosen professional community?	○	○	○	○	○	○
45. Do you really enjoy learning academic English?	○	○	○	○	○	○
46. Do you want to participate in professional or academic events that use English for communication?	○	○	○	○	○	○
47. Do you like the people use English fluently within your chosen profession?	○	○	○	○	○	○
48. Do you always look forward to EAP classes?	○	○	○	○	○	○

Part 3: You are at the end! Please choose the most appropriate answer

49. What is your gender?
○ Male (1)
○ Female (2)

50. What is your nationality?
○ Chinese (1)
○ Other (2)

51. Please write what country you are from.
_____

52. What is your age?
○ 18 (1)
○ 19 (2)
○ 20 (3)
○ 21 or older (4)

53. What is your major?
_____

54. What are the last five digits of your phone number? (This information is only used for connecting the data from this questionnaire with the data from your motivation journals. Your answers will be anonymous and your information will be protected.)
_____

55. What is your name? (This information is only used for connecting the data from this questionnaire with the data from your motivation journals. Your answers will be anonymous and your information will be protected.)
_____

56. What year did you start studying at XJTLU?

○ 2015 (4)
○ 2016 (3)
○ 2017 (2)
○ 2018 or 2019 (1)

57. What EAP class were you placed into during your first semester?
○ Introduction to EAP - EAP023 (Foundation pathway) (1)
○ Introduction to EAP - EAP025 (Standard pathway) (2)
○ Introduction to EAP - EAP021 (Advanced pathway) (3)
○ Other (4)

58. This question is about demotivation. If you are demotivated to study then it means you have lost motivation to study.

Have you ever been demotivated to study English in your schooling? If you have ever been demotivated to study English in elementary school, middle school, high school, or university, please describe why you became demotivated during that particular time period.
○ Elementary School (1) _____
○ Middle School (2) _____
○ High School (3) _____
○ University (4) _____

59. How would you describe your motivation to study EAP at this point in the semester?
○ very low (1)
○ low (2)
○ so-so (3)
○ high (4)
○ very high (5)

Appendix 2 – Cronbach's Alpha of Pilot MQ Results

Construct	Chronbach's Alpha Before Deleting Items	Item Number	Question Number	Item	Cronbach's Alpha if Item Deleted	Chronbach's Alpha After Deleting Items
Intended Effort	.650	A1	33	If an EAP course was offered in the future, I would like to take it.	.586	**.665**
		A2	38	I am prepared to expend a lot of effort in learning English.	.564	
		A3	26	I think that I am doing my best to learn English.	.613	
		A4	10	I would like to spend lots of time studying English.	.597	
		A5	35	I would like to concentrate on studying English more than any other topic.	.613	
		A6*	30	Compared to my classmates, I think I study EAP relatively hard.	.665	
Ideal L2 Self	.803	B1	39	I can imagine myself living abroad and having a discussion in English.	.770	**.803**
		B2	14	I can imagine myself working for an international company inside or outside of China where I use English on a daily basis.	.771	
		B3	4	I can imagine myself speaking English with international friends or colleagues.	.782	
		B4	12	I imagine myself as someone who is able to use English in academic or professional contexts.	.756	
		B5	6	I can imagine myself speaking English fluently in academic or professional contexts.	.770	
		B6	21	Whenever I think of my future career, I imagine myself using English in academic or professional contexts.	.784	
Instrumentality (promotion)	.698	C1	37	Studying EAP is important to me because I think it will someday be useful in getting a good job.	.636	**.722**
		C2*	3	Studying EAP is important because with a high level of English proficiency I will be able to make a lot of money.	.714	
		C3	20	Studying EAP is important to me because English proficiency is necessary for getting a good job.	.622	
		C4	19	Studying EAP is important to me because I think I'll need it for further studies.	.664	

		C5*	41	The things I want to do in the future require me to use English in academic or professional contexts.	.705	
		C6	25	Studying EAP is important to me because it offers a new challenge in my life.	.664	
		C7	40	Studying EAP is important to me in order to attain a higher social status.	.632	
Instrumentality (prevention)	.831	D1	5	I have to learn academic English because I don't want to fail my Language Centre EAP class.	.805	**.852**
		D2	36	I have to learn academic English because I don't want to fail non-Language Centre classes that are taught in English.	.800	
		D3	16	I have to study academic English because I don't want to get bad marks in my Language Centre EAP class.	.796	
		D4	17	I have to study academic English because I don't want to get bad marks in non-Language Centre classes that are taught in English.	.792	
		D5*	1	Studying EAP is important to me because if I have poor academic English I'll be considered a weak learner.	.852	
		D6	24	Studying EAP is important to me because I would feel ashamed if I got bad grades in my Language Centre EAP class.	.807	
		D7	13	Studying EAP is important to me because I would feel ashamed if I got bad grades in my non-Language Centre classes that are taught in English.	.805	
Linguistic Self-confidence	.717	E1	23	If I make more effort, I am sure I will be able to master academic English.	.622	**.717**
		E2	15	I believe that I will be capable of reading and understanding most academic texts in English if I keep studying EAP.	.671	
		E3	11	I am sure I will be able to write academic English without difficulty if I continue to study.	.656	
		E4	22	I am sure I have a good ability to learn academic English.	.672	
Ethnocentrism	.602	F1*	28	I find it difficult to work together with people who have different customs and values.	.610	**.610**
		F2	2	I would be happy if other cultures were more similar to Chinese.	.558	
		F3	31	It would be a better world if everybody lived like the Chinese.	.458	
		F4	34	Other cultures should learn more from my culture.	.549	
		F5	9	Most other cultures are backward compared to my Chinese culture.	.542	

Parental Encouragement / Family Influence	.804	G1	27	My family put a lot of pressure on me to study English.	.754	**.807**
		G2*	7	My parents/family believe that I must study English to be an educated person.	.807	
		G3	18	Studying English is important to me in order to bring honour to my family.	.779	
		G4	32	Being successful in English is important to me so that I can please my parents/relatives.	.774	
		G5	29	I must study English to avoid being punished by my parents/relatives.	.760	
		G6	8	My family put a lot of pressure on me to study abroad.	.764	
Attitudes Towards Learning English	.769	H1*	46	Do you like the atmosphere of your EAP classes?	.807	**.807**
		H2	50	Do you find learning academic English really interesting?	.699	
		H3	55	Do you always look forward to EAP classes?	.664	
		H4	52	Do you really enjoy learning academic English?	.677	
Integrativeness	.647	I1	53	Do you want to participate in professional or academic events that use English for communication?	.566	**.647**
		I2	54	Do you like the people use English fluently within your chosen profession?	.535	
		I3	43	Do you like meeting people from the international community that speak English fluently?	.622	
		I4	51	Do you think it is important to speak English fluently to be accepted as a member of your chosen professional community?	.593	
		I5	48	How much would you like to become similar to the people who speak English in your chosen profession?	.648	
English Anxiety	.834	J1	42	How nervous do you get when you are speaking English in your Language Centre EAP class?	.794	**.834**
		J2	45	How nervous do you get when you are speaking English in your non-Language Centre, major specific classes?	.770	
		J3	49	How uneasy would you feel using English to communicate with a professor or expert in your chosen profession?	.802	

		J	44	How tense would you get if a foreigner asked you for directions on campus in English?	.812	
		J	47	How afraid are you of sounding stupid in English because of the mistakes you make?	.821	

*items removed for final version of the motivation questionnaire

Motivation Journal

Semester 2, 2018-2019

Name:_____

EAP Class:_____

Last 5 digits of your phone number: _____

我爱学习
I LOVE STUDY
学习使我快乐
STUDY MAKES ME
HAPPY

If lost please return to Austin Pack, FB 537

Purpose of this Journal

The purpose of this journal is to provide a space for you to record changes in your motivation levels to study EAP.

我 只
的 有
心 学
里 习

Reflecting on your motivation levels daily and weekly will help you to understand what things demotivate you.

我爱学习
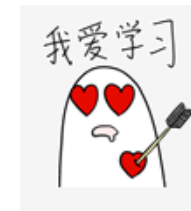
This is important because if you understand what things cause you to lose motivation, you can then develop strategies to combat demotivation and remain motivated throughout the semester!

好好学习，天天向上

How to use this Journal

Once per day reflect on your motivation levels to study EAP ***since the time of your last journal entry***. Choose a level of motivation and write a few notes why you selected that level of motivation. It's easy and super quick, just take a look at the following two examples.

Example 1:

4 = Very motivated
3 = Fairly motivated
2 = Slightly motivated
1 = Fairly demotivated
0 = Very demotivated

Reason for selecting this motivation level:

EAP speaking exam tomorrow. MUST study!!!!

Example 2:

4 = Very motivated
3 = Fairly motivated
2 = Slightly motivated
1 = Fairly demotivated
0 = Very demotivated

Reason for selecting this motivation level:

I saw my EAP speaking exam score… it wasn't as high as I was expecting it to be.

How to use this Journal (part 2)

Once per week reflect on your motivation levels to study EAP during the ***previous week.*** Using your motivation journal daily entries as a guide, complete a weekly reflection entry by filling in the motivation change graph. Write a paragraph explaining why your motivation levels changed or remained the same during the week.

Weekly Reflection Example 1:
For each day of the week choose a motivation level that best reflects your motivation for that day. Please refer to your motivation journal daily entries.

4 = Very motivated
3 = Fairly motivated
2 = Slightly motivated
1 = Fairly demotivated
0 = Very demotivated

Week #2	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Motivation	4	4	3	2	1	1	1

Weekly Reflection Example 1 (continued):

Questions: (only answer the questions that match your motivation level changes)

1. Did your motivation go down at any point in the week? If so, what might be the cause for this change?

   My motivation went down a little bit on Wednesday and then Thursday because of the colder weather. I sort of just wanted to stay at home and not go to class. On Friday I saw my score for my essay and it was only a 30, which is much lower than I was hoping. So I'm feeling demotivated because of that.

2. Did your motivation go up at any point in the week? If so, what might be the cause for this change? (Does not apply this week)

3. If you lost motivation and did not regain motivation, why did your motivation remain low instead of increasing?

   I think it is a combination of things like the cold weather, a low score on my assignment, and just feeling tired because its week 12. I have a lot of deadlines recently in my other classes, so I'm not as focused on my EAP class recently.

4. If your motivation stayed the same, why did it stay the same? (Does not apply this week)

Weekly Reflection Example 2:

For each day of the week choose a motivation level that best reflects your motivation for that day. Please refer to your motivation journal daily entries.

4 = Very motivated
3 = Fairly motivated
2 = Slightly motivated
1 = Fairly demotivated
0 = Very demotivated

Week #2	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Motivation	3	3	1	0	2	3	3

Questions: (only answer the questions that match your motivation level changes)

1. Did your motivation go down at any point in the week? If so, what might be the cause for this change?

   I lost motivation on Wednesday because my teacher put me in a group with other students that I don't get along well with. On Thursday the teacher said we would be in this group for a semester long project. After class I asked if I could be in a different group but the teacher said no. I was mad.

2. Did your motivation go up at any point in the week? If so, what might be the cause for this change? <mark>On Friday the group met and we made a plan for how we would complete the group project. The other students had some good ideas. On Saturday and Sunday we worked on the project and made a lot of progress. Now I don't think working in the group will be so bad after all. I enjoy the assignment and think the class will like our presentation.</mark>

3. If you lost motivation and did not regain motivation, why did your motivation remain low instead of increasing? <mark>(Does not apply this week)</mark>

4. If your motivation stayed the same, why did it stay the same? <mark>(Does not apply this week)</mark>

Reminder:

If you have any questions, feel free to contact me.
Office: FB537
Email: Austin.Pack@xjtlu.edu.cn
Tel: 0512 8188 4860

THANK YOU!!

Week 2 Monday (2/25)

4 = Very motivated
3 = Fairly motivated
2 = Slightly motivated
1 = Fairly demotivated
0 = Very demotivated

Reason for selecting this motivation level:

_____

_____

Week 2 Tuesday (2/26)

4 = Very motivated
3 = Fairly motivated
2 = Slightly motivated
1 = Fairly demotivated
0 = Very demotivated

Reason for selecting this motivation level:

_____

_____

Week 2 Wednesday (2/27)

4 = Very motivated
3 = Fairly motivated
2 = Slightly motivated
1 = Fairly demotivated
0 = Very demotivated

Reason for selecting this motivation level:

_____

_____

Week 2 Friday (3/1)

4 = Very motivated
3 = Fairly motivated
2 = Slightly motivated
1 = Fairly demotivated
0 = Very demotivated

Reason for selecting this motivation level:

_____

_____

Week 2 Thursday (2/28)

4 = Very motivated
3 = Fairly motivated
2 = Slightly motivated
1 = Fairly demotivated
0 = Very demotivated

Reason for selecting this motivation level:

_____

_____

Week 2 Saturday (3/2)

4 = Very motivated
3 = Fairly motivated
2 = Slightly motivated
1 = Fairly demotivated
0 = Very demotivated

Reason for selecting this motivation level:

_____

_____

Week 2 Sunday (3/3)
4 = Very motivated
3 = Fairly motivated
2 = Slightly motivated
1 = Fairly demotivated
0 = Very demotivated

Reason for selecting this motivation level:

_____

_____

Week 2 Weekly Reflection (2/25-3/3)
For each day of the week choose a motivation level that best reflects your
motivation for that day. Please refer to your motivation journal daily entries.
4 = Very motivated
3 = Fairly motivated
2 = Slightly motivated
1 = Fairly demotivated
0 = Very demotivated

Week #2	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Motivation							

Week 2 Weekly Reflection (continued)

Questions: (only answer the questions that match your motivation
level changes)

1. Did your motivation go down at any point in the week? If so,
   what might be the cause for this change?

_____

_____

_____

_____

2. Did your motivation go up at any point in the week? If so, what
   might be the cause for this change?

_____

_____

_____

_____

Week 2 Weekly Reflection (continued)

3. If you lost motivation and did not regain motivation, why did your motivation remain low instead of increasing?

_____

_____

_____

_____

4. If your motivation stayed the same, why did it stay the same?

_____

_____

_____

_____

Rate your motivation considering

the following questions:

How much effort do I want to

put into learning EAP?

How much do I enjoy

learning EAP?

Appendix 5 – Protocol of Interviews

Semi-Structured Interview Protocol and Questions

The following is a list of sample questions that will be used to elicit responses regarding changes in students' motivational levels.

Ask students to draw a graph that depicts changes in their motivation from the beginning of the semester until the current time. Referring to the student's graph, investigate reasons for changes and/or lack of changes by asking relevant questions from below:

1. Here [referring to the graph or motivation journal] you say you had a decrease in motivation, can you explain what happened?

2. Here [referring to the graph or motivation journal] you say you had an increase in motivation, can you explain what happened?

3. Here [referring to the graph or motivation journal] your motivation stays high, why do you think you were able to maintain motivation? Where there challenges or things that might have been demotivating to you, but you were able to stay motivated despite them? Why were you able to stay motivated despite these challenges?

4. Here [referring to the graph or motivation journal] your motivation stays low, what do you think prevents your motivation from increasing? Why do you think this keeps your motivation low? If this problem was removed, do you think your motivation would increase? Why/why not?

5. What discourages you the most from studying EAP? Try to think of three things.

6. What motivates you the most to study EAP? Try to think of three things.

7. What are you doing now or planning to do to keep motivated in your English learning?

Appendix 6 – Protocol of Focus Groups

1. Welcome participants, warm up questions

     -How is the semester going?
     -How are exams coming along?
     -What classes have the most difficult exams?

2. Explain purpose of the focus group – to more fully understand the things that are affecting students' motivation to study EAP.

3. Give each student a handout and envelope with cut up pieces with demotivating factors inside

4. Ask students to organize the demotivating factors according to the three categories: things that do not affect me, things that affect me in a minor way, and things that affect me in a major way. Allow for 5-10 minutes for students to complete this.

5. Can you identify the top 3 demotivating factors for you?

6. Consider the factors in your major and minor categories. Which do you think has a greater effect on your motivation – factors outside or inside of the EAP classroom? Circle an answer. – Explain why.

7. Repeat steps 4-6 but with motivating factors.

8. Teachers weren't mentioned that often as being a demotivating factor. Why do you think this is? Do you think it is because you turned your motivation journal into your teacher?

9. To what degree is your motivation to study EAP affected by other classes?

10. Would you say your motivation to study EAP is stable or that it is often changing? Are their periods of stability? Can you describe a period of time where your motivation was stable? How long was it stable for?

11. Did reflecting on your motivation and writing about your motivation in your motivation journal affect your motivation at all? How?
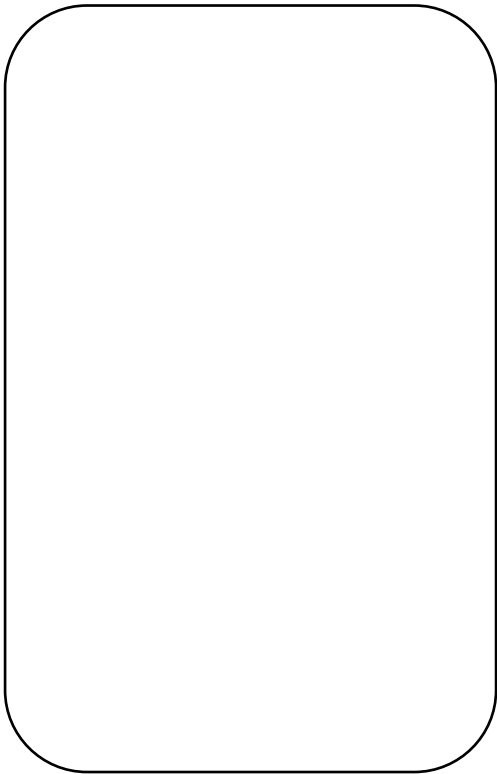
Focus group demotivating factors list

Physical exercise before studying or attending EAP class
Being hungry
Having a lot of classes in one day
Feeling tired
Completing a major assignment not related to EAP
Busy with clubs and activities
Not wanting to study after having a long break
Bad weather
Having no plan
Your EAP classmates
Completing a major EAP assignment
Being sick
The content of EAP class being boring
Having a bad mood
Staying up too late the night before
Not knowing how to make progress on an assignment
Too much work in other classes
Not having EAP class today
Having a bad experience in class before EAP class (for example you can't
understand the teacher's English, the teacher gives you a lot of homework, or it's a
boring class)
Seeing your grades from last semester
Video games
A difficult assignment in EAP class
Not having enough time
The EAP teacher
Not performing well on an assignment or activity in English
Deadlines in other classes
The weekend
Having no assigned tasks in EAP class
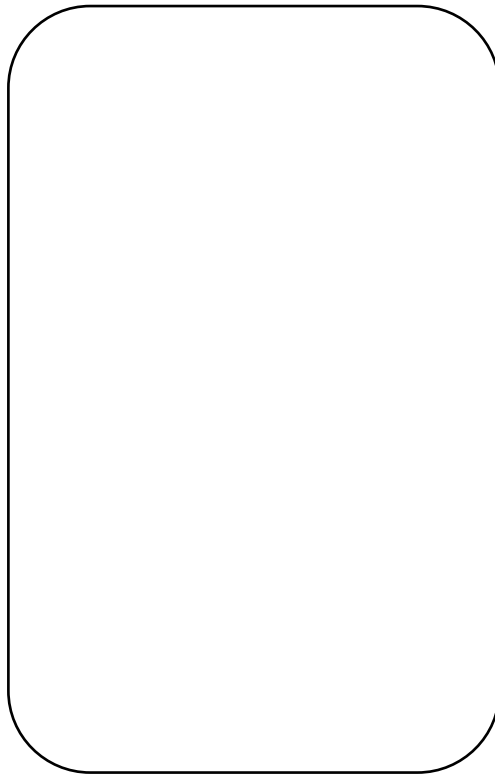
<u>Motivating factors list for focus groups</u>
Having a plan to study
Eating something delicious before studying or attending EAP class
Watching English TV shows or movies
Feeling good
Reading English novels or books
Desiring to get more knowledge
Seeing your grades from last semester
Interacting with native speakers in English
Interacting with foreign students that speak English well
Feeling guilty for not studying the day before
Physical exercise before studying or attending class
Receiving encouragement from parents
Seeing other Chinese people who speak English really well
Good weather
Having a good mood
Having a goal
Completing a major assignment not related to EAP class
A nice study environment
Having a relaxing day
Having enough free time to study
Looking forward to the weekend
Being excited about something that will happen soon (such as a date, a new movie, a new video game, travelling)
Having a good sleep
Starting a new week
As assignment that helps you develop a new skill
Deadline is approaching
Preparing for a presentation
Learning from your classmates
Having a good discussion with your classmates
The content of EAP class relates to your major
Completing a major EAP assignment
Your EAP classmates
Getting feedback on CW from your teacher
The EAP teacher
Having EAP class today
Knowing how to make progress on an assignment
Receiving encouragement from a teacher
Getting feedback on CW from your peers
Preparing for an examination

THINGS THAT INCREASE MY MOTIVATION TO STUDY EAP

Things that do not affect me:

Things that affect me in a minor way:

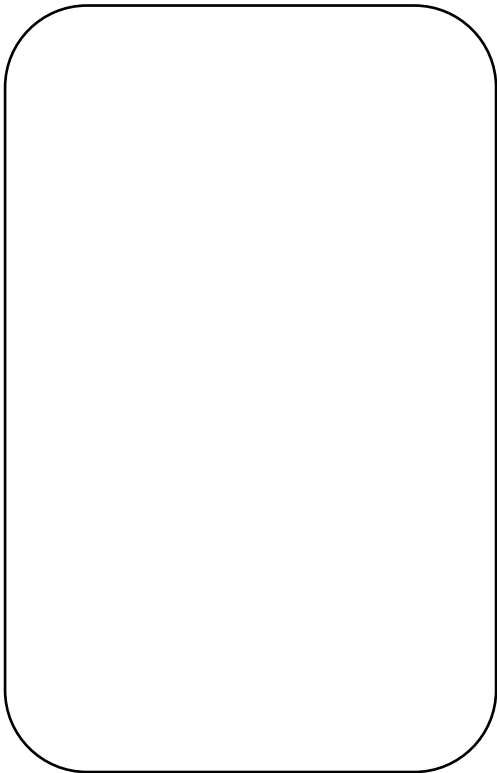Things that affect me in a major way:

INSIDE   OUTSIDE

THINGS THAT DECREASE MY MOTIVATION TO STUDY EAP

Things that do not affect me:

Things that affect me in a minor way:

Things that affect me in a major way:
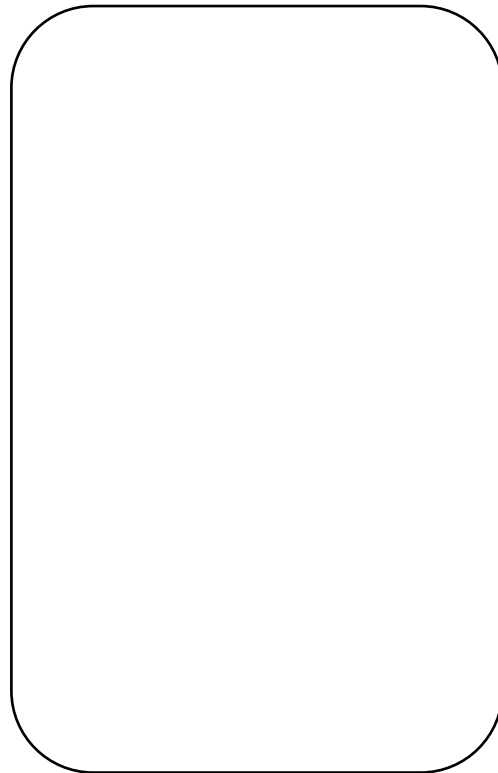
INSIDE   **OUTSIDE**

Appendix 7 – Pattern and Structure Matrices of Pilot Version of the Demotivation Questionnaire

Pattern Matrix^a

	Component							
	1	2	3	4	5	6	7	8
2. Being in a bad mood	.823							
7. Feeling sad	.816							
6. Feeling anxious or worried	.797							
28. Feeling frustrated or upset	.680							
3. Being uncertain about how to make progress on an EAP assignment	.480		.423					
15. The effect of my classmates on me		.916						
14. The effect of my group-mates on me		.776						
16. The effect of my friends on me		.699						
32. Feeling unsure about an EAP exam			.823					
21. Having no goal related to English			.740					
24. Having a difficult EAP assignment			.604					
10. Finding it difficult to understand the lecturer's English (in classes other than EAP class)			.481					.438
19. Having no plan to study EAP			.444					
8. Having no EAP class				.852				
12. Having no assignment to work on				.773				
9. Playing mobile phone games				.662				
20. Finishing an EAP exam				.401				
29. Staying up late					-.865			
25. Not getting enough sleep					-.863			
18. Having a lot of deadlines in the near future					-.608			
5. Having lots of classes on the same day					-.566			
11. Feeling Tired					-.564			
27. Exams related to classes other than EAP class								
13. Watching TV series						.731		
30. Playing video games						.619		
23. The effect my roommates have one me						.514		
26. The effect my EAP teacher has on me		.426					.693	
31. Getting sick								
4. When the weather is too cold								.662

	1	2	3	4	5	6	7	8
1. When the weather is too hot								.487
17. When the weather is bad								
22. Having a heavy workload in classes other than EAP class								

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 22 iterations.

Structure Matrix

	Component							
	1	2	3	4	5	6	7	8
7. Feeling sad	.867				-.462			
2. Being in a bad mood	.847			.400				
28. Feeling frustrated or upset	.819				-.600			
6. Feeling anxious or worried	.797		.433					
3. Being uncertain about how to make progress on an EAP assignment	.594		.578					
31. Getting sick	.488				-.446		.425	
15. The effect of my classmates on me		.888						
14. The effect of my group-mates on me		.833						
16. The effect of my friends on me		.788				.452		
32. Feeling unsure about an EAP exam			.814					
21. Having no goal related to English			.802					
24. Having a difficult EAP assignment	.444		.727					
19. Having no plan to study EAP	.401	.474	.586	.478	-.443			
10. Finding it difficult to understand the lecturer's English (in classes other than EAP class)		.459	.552					.495
8. Having no EAP class				.821				
12. Having no assignment to work on				.783				
9. Playing mobile phone games				.745		.419		
20. Finishing an EAP exam	.464	.417		.560	-.446			
25. Not getting enough sleep	.450				-.868			
29. Staying up late					-.841			
11. Feeling Tired	.634				-.751			

18. Having a lot of deadlines in the near future				.439	-.699			
5. Having lots of classes on the same day	.493			.494	-.687			
27. Exams related to classes other than EAP class	.558			.464	-.603	.455		
22. Having a heavy workload in classes other than EAP class	.515	.434		.427	-.556	.438		
13. Watching TV series						.777		
30. Playing video games				.457		.706		
23. The effect my roommates have one me			.421			.655		
26. The effect my EAP teacher has on me		.494					.710	
4. When the weather is too cold								.728
1. When the weather is too hot	.484	.476			-.407			.600
17. When the weather is bad		.424			-.456			.479

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

Appendix 8 – Final Demotivation Questionnaire

Dear students,

As an English teacher at XJTLU I care a lot about helping students succeed in their studies. This is why as a Ph.D. student ***I am interested in better understanding student motivation to learn EAP at XJTLU.If you answer all questions in this survey sincerely you will have a chance to win 100 RMB.***

This questionnaire is not a test, there are no right or wrong answers. Your answers will be kept confidential. ***Please give your answers sincerely.***

This study has been approved by the XJTLU Ethics committee and is conducted by Austin Pack, a Ph.D. student at XJTLU's English department. If you have any questions or concerns, you may contact Austin Pack (contact information below).

1. **Purpose of the study:** The purpose of this research is to better understand the dynamics of motivation among learners English for Academic Purposes (EAP) at XJTLU.
2. **Confidentiality:** All personal details will remain confidential to the research team. No individuals will be identified in any published data or recordings. No copies of the data or discussions of specific data will be given to the university or used in any evaluation process.
3. **Risks:** There are no foreseeable risks to this study.
4. **Participation is voluntary:** If you decide to participate, you are free to withdraw your consent at any time with no penalty to you.

5. **More information:** You are encouraged to contact the Principal Investigator if you have any questions or concerns about this study (as above). You may also contact XJTLU's Research Ethics Sub-Committee: ethics@xjtlu.edu.cn.

Principal Investigator: Austin Pack, Language Tutor and PhD student
Telephone (PI): 81884860
Email (PI): Austin.pack@xjtlu.edu.cn
Address: Room 537 Foundation Building, Xi'an Jiaotong Liverpool University, No. 111 Ren Ai Road, Dushu Lake Higher Education Town, SIP, Suzhou, Jiangsu Province, People Republic of China 215123

By continuing with the survey below, you acknowledge that you are over 18 years of age and agree to voluntarily take part in this research.
- ○ I agree
- ○ I do not agree

During your studies at XJTLU, **how frequently** did the following things **lead to a *decrease* in your willingness to put effort** into studying EAP.

	Never (1)	Very Rarely (2)	(3)	(4)	(5)	(6)	(7)	Very Frequently (8)	Always (9)
1. When the weather is too hot	○	○		C	C	C	C	○	○
2. Being in a bad mood	○	○		C	C	C	C	○	○
3. Being uncertain about how to make progress on an EAP assignment	○	○		C	C	C	C	○	○
4. When the weather is too cold	○	○		C	C	C	C	○	○
5. Having lots of classes on the same day	○	○		C	C	C	C	○	○
6. Feeling anxious or worried	○	○		C	C	C	C	○	○
7. Feeling sad	○	○		C	C	C	C	○	○
8. Having no EAP class	○	○		C	C	C	C	○	○
9. Playing mobile phone games	○	○		C	C	C	C	○	○
10. Finding it difficult to understand the lecturer's English (in classes other than EAP class)	○	○		C	C	C	C	○	○
11. Feeling Tired	○	○		C	C	C	C	○	○
12. Having no assignment to work on	○	○		C	C	C	C	○	○
13. Watching TV series	○	○		C	C	C	C	○	○
14. The effect of my group-mates on me	○	○		C	C	C	C	○	○
15. The effect of my classmates on me	○	○		C	C	C	C	○	○
16. The effect of my friends on me	○	○		C	C	C	C	○	○

During your studies at XJTLU, how frequently did the following things lead to a decrease in your

willingness to put effort into studying EAP.

	Never (1)	Very Rarely (2)	(3)	(4)	(5)	(6)	(7)	Very Frequently (8)	Always (9)
17. When the weather is bad	○	○	○	○	○	○	○	○	○
18. Having a lot of deadlines in the near future	○	○	○	○	○	○	○	○	○
19. Having no plan to study EAP	○	○	○	○	○	○	○	○	○
20. Finishing an EAP exam	○	○	○	○	○	○	○	○	○
21. Having no goal related to English	○	○	○	○	○	○	○	○	○
22. Having a heavy workload in classes other than EAP class	○	○	○	○	○	○	○	○	○
23. The effect my roommates have on me	○	○	○	○	○	○	○	○	○
24. Having a difficult EAP assignment	○	○	○	○	○	○	○	○	○
25. Not getting enough sleep	○	○	○	○	○	○	○	○	○
26. The effect my EAP teacher has on me	○	○	○	○	○	○	○	○	○
27. Exams related to classes other than EAP class	○	○	○	○	○	○	○	○	○
28. Feeling frustrated or upset	○	○	○	○	○	○	○	○	○
29. Staying up late	○	○	○	○	○	○	○	○	○
30. Playing video games	○	○	○	○	○	○	○	○	○
31. Getting sick	○	○	○	○	○	○	○	○	○
32. Feeling unsure about an EAP exam	○	○	○	○	○	○	○	○	○
33. The effect of the environment in my dormitory or apartment has on me	○	○	○	○	○	○	○	○	○

Please list any other factors *inside EAP class* (for example - classmates, the teacher, learning content) that may lead to a *decrease* in your willingness to study EAP.

_____

Please list any other factors outside EAP class (for example - weather, friends, other classes) that may lead to a *decrease* in your willingness to study EAP.

_____

How much do you agree or disagree with the following statement?

	Strongly disagree	-	-	-	-	-	-	-	Strongly agree
Factors outside of EAP class have a stronger effect on my motivation to study EAP than factors inside of EAP class.	○	○	○	○	○	○	○	○	○

What is your gender?

○ Male

○ Female

What is your nationality?

○ Chinese

○ Other

Please specify what nationality you are.

_____

What is your age?

- ○ 18
- ○ 19
- ○ 20
- ○ 21
- ○ 22
- ○ 23
- ○ 24
- ○ 25 or older

What is your major?

_____

What year student are you?

- ○ 1
- ○ 2
- ○ 3
- ○ 4

How would you asses your English abilities?

- ○ Basic
- ○ Intermediate
- ○ Advanced

If you would like a chance to win 100 RMB for completing the survey, please write your WeChat ID

_____

Appendix 9 – Ethics Approval for Stage 1 and Stage 2 Research

Tue 11/13/2018 3:08 PM

ethics

RE: PGR-LRR application

To   Austin Pack

ℹ You forwarded this message on 1/16/2019 1:25 PM.
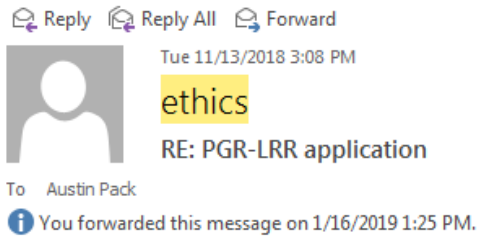
Dear Austin,

Your application has been approved via Chair.

BR

Siobhan

From: Austin Pack
Sent: Monday, November 12, 2018 4:30 PM
To: ethics <ethics@xjtlu.edu.cn>
Cc: Tamas Kiss <Tamas.Kiss@xjtlu.edu.cn>; Rining Wei <Rining.Wei@xjtlu.edu.cn>
Subject: PGR-LRR application

Dear Ethics Sub-Committee,

Please find my PGR-LRR ethics approval application attached. If there is anything else needed, please don't hesitate to contact me.

Thanks,

Austin Pack

P156D Xi'an Jiaotong-Liverpool University
111 Ren'ai Road, Dushu Lake Higher Education Town SIP
Suzhou 215123,
P.R. China.

8 October 2019

Dear Austin Pack,

Proposal Number   19-02-28

Title:

Investigating demotivation of EAP learners at a global EMI university

Your application for University Ethics Committee (UEC) approval has been reviewed and approved by the UEC's action.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to, and approved by, the UEC prior to the implementation of any changes. You are required to report to the UEC as soon as possible (or within 5 working days) any issues regarding the occurrence of adverse events, such as risks or harms, involving study participants.

Sincerely,

Professor Igea Troiani
Chair, University Ethics Committee

Appendix 10 – Student Participant Information and Consent Form for Stage 1 of the Study

Title of project: 'Investigating dynamics of demotivation and remotivation among Chinese learners of EAP at a global EMI university'

Principal Investigator: Austin Pack, Language Tutor and PhD student
Telephone (PI): 81884860
Email (PI): Austin.pack@xjtlu.edu.cn
Address: Room 537 Foundation Building,
Xi'an Jiaotong Liverpool University,
No. 111 Ren Ai Road,
Dushu Lake Higher Education Town,
SIP, Suzhou, Jiangsu Province,
People Republic of China 215123

1. **Purpose of the study:** The project investigates the dynamics of motivation of first-year EAP students. This includes understanding how motivation changes over the course of a semester, what factors demotivate students, and what factors remotivate students.

2. **Procedures to be followed:** If you consent to participate in this study, you will asked to do the following:

a. Complete a motivational questionnaire during the second and eleventh weeks of the Spring 2019 semester. This will be administered electronically online and should take approximately 10 minutes to complete each time.

b. Keep a weekly electronic journal from the second week to the eleventh week of the Spring 2019 semester. Once per week during this ten week period you will be asked to evaluate your motivation levels and answer a few questions as to why your motivational levels may or may not have changed. This should take approximately 5 minutes to complete in class.

c. Be willing to participate in a semi-structured interview during the ten week period. A researcher will discuss with you changes in motivational levels and possible associated reasons. These interviews will be audio recorded. The interview will take approximately 30 minutes and will be scheduled at a mutually convenient time and venue

d. Be willing to participate in a focus group discussion after the ten week period. A researcher will lead a focus group discussion of five to six students that explores demotivating and remotivating factors experienced by students. These focus group discussions will be audio recorded. The focus group discussion will be approximately 50 minutes and will be scheduled at a mutually convenient time and venue.

3. **Duration:** Scheduling for meetings, interviews, etc. will be arranged around your classes. The study will begin February 25th, 2019 and continue until the middle of May, 2019.

4. **Confidentiality:** All personal details will remain confidential to the research team. No individuals will be identified in any published data or recordings. No copies of the data or discussions of specific data will be given to the university or used in any evaluation process.

5. **Risks:** There are no foreseeable risks to this study.

6. **Benefits:** There are several benefits of participating in the study and regularly reflecting on your motivation levels to study EAP. First, you may learn what factors lower your motivation to study and you may develop strategies to avoid and/or overcome these factors. Second, you may learn what factors are helpful in reenergizing your motivation levels. These can help you develop metacognitive strategies for the successful completion of your studies. Finally, you will have opportunities to practice and receive feedback on your oral and written English from a native speaker.

7. **Participation is voluntary:** If you decide to participate, you are free to withdraw your consent at any time with no penalty to you.

8. **More information:** You are encouraged to contact the Principal Investigator if you have any questions or concerns about this study (as above). You may also contact XJTLU's Research Ethics Sub-Committee: ethics@xjtlu.edu.cn.

9. **Consent:** This is to certify that I,.. ,

am over 18 years of age and agree to participate in this project.

Signature of student: .... Date ....

This project has been reviewed by the XJTLU Research Ethics Sub-Committee to ensure it meets all ethical standards for research.

Researcher's confirmation statement

I have provided information about the research to the participant and believe that he/she understands the nature of the study, the expectations of the procedures, and the rights of a research participant. To the best of my knowledge, the participant has voluntarily signed this informed consent form, without coercion or undue influence.

Researcher signature _____Date _____

Name: _____

Appendix 11 - Results of Matrix Queries of Thematic Codes and Negative Motivation Levels

Results of matrix query of the 25 thematic codes that corresponded most frequently with the motivation level *0 – very demotivated* (all journals)

	Thematic code	Number of times the thematic code relates to *0 – very demotivated*
1	vacation and travel	30
2	physical health	28
3	rest and sleep	27
4	assignments, coursework, homework and projects	25
5	Exams or tests or quizzes or assessment	24
6	classes	23
7	other modules	18
8	ARC (architecture)	13
9	Time or days	10
10	being or feeling – moods and emotions	9
11	preparing for exam or midterm	9
12	a competition	8
13	entertainment	8
14	tired	8
15	desire (lack of - negative)	7
16	can't fall asleep or didn't have a good sleep or lack of sleep	7
17	weekend	7
18	Deadline	6
19	clubs, general, issues, activities, work etc.	6
20	didn't study or learn	6
21	Didn't study or learn EAP	6
22	friends	6
23	holiday	6
24	prepare for competition	5
25	movies	5

Results of matrix query of the 25 thematic codes that corresponded most frequently with the motivation level *1 – fairly demotivated* (all journals)

	Thematic Code	Number of times the thematic code relates to *1 – fairly motivated*
1	assignments, coursework, homework and projects	63
2	physical health	51
3	classes	51
4	rest and sleep	46

5	other modules	45
6	Exams or tests or quizzes or assessment	29
7	vacation and travel	26
8	being or feeling	25
9	Time or days	22
10	busy	21
11	clubs, general, issues, activities, work etc.	18
12	Deadline	15
13	Negative moods and emotions	14
14	desire (lack of - negative)	13
15	entertainment	12
16	tired	12
17	math (if not specified like calculus)	12
18	ARC (architecture)	11
19	preparing for exam or midterm	11
20	other things	10
21	friends	9
22	exam is approaching	9
23	what students did (studying related)	9
24	weekend	8
25	holiday	7

Appendix 12 – Results of Matrix Queries of Thematic Codes and negative

Motivation Level Change

Results of matrix query of the 25 thematic codes that corresponded most frequently with a -4 change in motivation level from the previous day (all journals)

	Thematic code	Number of times the thematic code corresponded to a -4 change in motivation level from the previous day
1	assignments, coursework, homework and projects	6
2	physical health	5
3	rest and sleep	5
4	Deadline	3
5	a competition	2
6	finishing deadlines	2
7	busy	2
8	entertainment	2
9	Exams or tests or quizzes or assessment	2
10	Time or days	2
11	prepare for competition	1
12	a lot of work to do	1
13	finishing an essay, assignment, project or homework	1
14	need to redo an assignment	1
15	Too busy with club	1
16	classes	1
17	other modules	1
18	ARC (architecture)	1
19	classmates	1
20	group members	1
21	clubs, general, issues, activities, work etc.	1
22	club issue	1
23	desire (lack of - negative)	1
24	Don't want to do much or anything	1
25	dormitory	

Results of matrix query of the 25 thematic codes that corresponded most frequently with a -3 change in motivation level from the previous day (all journals)

	Thematic code	Number of times the thematic code corresponded to a -3 change in motivation level from the previous day
1	physical health	11
2	rest and sleep	10
3	assignments, coursework, homework and projects	9
4	Time or days	5

5	vacation and travel	5
6	entertainment	4
7	finishing an essay, assignment, project or homework	4
8	classes	4
9	need rest	4
10	being or feeling – moods and emotions	4
11	Deadline	3
12	games or mobile games or video games	3
13	sport and exercise	3
14	Doing sport or athletics	3
15	Friday, last week day	3
16	busy	2
17	Exams or tests or quizzes or assessment	2
18	other modules	2
19	desire (lack of - negative)	2
20	what students did (studying related)	2
21	being relaxed or relaxing	2
22	demotivated	2
23	don't want to study	2
24	friends	2
25	other things	2

Results of matrix query of the 25 thematic codes that corresponded most frequently with a -2 change in motivation level from the previous day (all journals)

	Thematic code	Number of times the thematic code corresponded to a -2 change in motivation level from the previous day
1	assignments, coursework, homework and projects	35
2	physical health	22
3	rest and sleep	22
4	classes	22
5	other modules	20
6	being or feeling – moods and emotions	16
7	busy	15
8	Deadline	14
9	Exams or tests or quizzes or assessment	14
10	Time or days	10
11	friends	8
12	Negative moods and emotions	8
13	entertainment	7
14	problems or bad things	7
15	ARC	7
16	desire (lack of - negative)	6
17	other things	6
18	tired	6

19	being relaxed or relaxing	5
20	demotivated	5
21	otherwise occupied, busy with other stuff	5
22	clubs, general, issues, activities, work etc.	5
23	deadline approaching	5
24	playing or having fun	5
25	staying up late	5

Results of matrix query of the 25 thematic codes that corresponded most frequently with a -1 change in motivation level from the previous day (all journals)

	Thematic code	Number of times the thematic code corresponded to a -1 change in motivation level from the previous day
1	assignments, coursework, homework and projects	85
2	classes	48
3	physical health	41
4	other modules	39
5	rest and sleep	36
6	Time or days	32
7	being or feeling – moods and emotions	31
8	busy	25
9	Exams or tests or quizzes or assessment	20
10	clubs, general, issues, activities, work etc.	16
11	what students did (studying related)	16
12	Deadline	15
13	entertainment	14
14	vacation and travel	14
15	desires (good)	14
16	Negative moods and emotions	12
17	desire (lack of - negative)	12
18	weekend	12
19	essay or paper	11
20	friends	10
21	other things	10
22	no class	10
23	ARC (architecture)	9
24	study	9
25	tired	8

Appendix 13 – Results of Matrix Queries of Thematic Codes and Number of References in Reflection Questions in Students' Motivation Journals

Reflection Question #1: Did your motivation go down at any point in the week? If so, what might be the cause for this change?

1: assignments, coursework, homework and projects	73
2 : being or feeling – moods and emotions	42
3 : physical health	42
4 : rest and sleep	34
5 : classes	33
6 : other modules	30
7 : Deadline	26
8 : busy	25
9 : Exams or tests or quizzes or assessment	25
10 : Time or days	23
11 : other things	21
12 : negative moods and emotions	19
13 : entertainment	18
14 : tired	17
15 : being relaxed or relaxing	15
16 : vacation and travel	14
17 : otherwise occupied, busy with other stuff	13
18 : too much work or heavy workload	12
19 : clubs, general, issues, activities, work etc.	11
20 : games or mobile games or video games	9
21 : playing or having fun	9
22 : pressure, stress, weight	9
23 : weekend	9
24 : finishing an essay, assignment, project or homework	8
25 : desire (lack of - negative)	8

Reflection Question #2: Did your motivation go up at any point in the week? If so, what might be the cause for this change?

1: assignments, coursework, homework and projects	78
2: being or feeling – moods and emotions	26
3: Deadline	25
4: Time or days	23
5: classes	20
6 : desires (good)	20
7: physical health	15
8: rest and sleep	15
9: positive emotion/mood	14

10 : essay or paper	13
11 : EAP	13
12 : getting an idea of how to make progress	13
13 : having free time or enough time to study	13
14 : weather	12
15 : Exams or tests or quizzes or assessment	11
16 : seminar	9
17 : deadline approaching	8
18 : nice weather	8
19 : other modules	7
20 : the need to complete an assignment	7
21 : Mood	6
22 : desire to learn	6
23 : desire to improve	6
24 : entertainment	5
25 : vacation and travel	5

Reflection Question #3: If you lost motivation and did not regain motivation, why did your motivation remain low instead of increasing?

1: assignments, coursework, homework and projects	9
2: busy	6
3: classes	5
4: physical health	5
5: other modules	5
6: vacation and travel	4
7: not knowing something	4
8: being or feeling – moods and emotions	3
9: Deadline	3
10: rest and sleep	3
11: negative moods and emotions	3
12: ARC	3
13: problems or bad things	3
14: no clear goal	3
15: don't know how to regain motivation	3
16: Exams or tests or quizzes or assessment	2
17: entertainment	2
18: motivation	2
19: what students did (studying related)	2
20: status is stable	2
21: study	2
22: other things	2
23: tired	2
24: clubs, general, issues, activities, work etc.	2
25: playing or having fun	2

Reflection Question #4: If your motivation stayed the same, why did it stay the

same?

1: assignments, coursework, homework and projects	15
2: being or feeling – moods and meotions	11
3: status is stable	8
4: nothing special or exciting	8
5: situation doesn't change	8
6: Exams or tests or quizzes or assessment	7
7: not knowing something	6
8: negative moods and emotions	6
9: don't know how to regain motivation	6
10: busy	5
11: physical health	5
12: rest and sleep	5
13: desires (good)	5
14: desire to learn	5
15: desire (lack of - negative)	4
16: holiday	4
17: don't know how to find motivation	4
18: essay or paper	4
19: classes	3
20: vacation and travel	3
21: Deadline	3
22: feel like not making progress	3
23: no reason or don't know	3
24: have a clear aim or goal	3
25: demotivated	3

Appendix 14 - Results of Matrix Queries of Thematic Codes and Positive Motivation Levels

Results of matrix query of the 25 thematic codes that corresponded most frequently with the motivation level *2 – slightly motivated* (all journals)

	Thematic code	Number of times the thematic code relates to *2 – slightly motivated*
1	assignments, coursework, homework and projects	132
2	classes	67
3	other modules	56
4	physical health	52
5	rest and sleep	49
6	being or feeling – moods and emotions	46
7	Exams or tests or quizzes or assessment	40
8	Time or days	39
9	busy	38
10	Deadline	22
11	Negative moods and emotions	22
12	vacation and travel	22
13	clubs, general, issues, activities, work etc.	20
14	other things	16
15	essay or paper	15
16	no assignment or lack of assignment	15
17	desire (lack of - negative)	15
18	desires (good)	14
19	tired	13
20	weekend	12
21	being relaxed or relaxing	11
22	math (if not specified like calculus)	11
23	positive moods and emotions	10
24	entertainment	10
25	preparing for exam or midterm	10

Results of matrix query of the 25 thematic codes that corresponded most frequently with the motivation level *3 – fairly motivated* (all journals)

	Thematic Code	Number of times the thematic code relates to *3 – fairly motivated*
1	assignments, coursework, homework and projects	188
2	classes	57
3	Time or days	55
4	desires (good)	55
5	essay or paper	49

	Thematic Code	
6	being or feeling – moods and emotions	48
7	Exams or tests or quizzes or assessment	41
8	other modules	33
9	what students did (studying related)	30
10	seminar	28
11	Deadline	27
12	making progress	24
13	positive moods and emotions	20
14	physical health	19
15	rest and sleep	19
16	EAP	19
17	feedback	18
18	having free time or enough time to study	18
19	desire to learn	16
20	friends	16
21	desire to improve	16
22	deadline approaching	15
23	weather	15
24	nice weather	15
25	Negative moods and emotions	13

Results of matrix query of the 25 thematic codes that corresponded most frequently with the motivation level *4 – very motivated* (all journals)

	Thematic Code	Number of times the thematic code relates to *4 – very motivated*
1	assignments, coursework, homework and projects	155
2	essay or paper	50
3	Deadline	45
4	Time or days	38
5	being or feeling – moods and emotions	33
6	desires (good)	31
7	classes	29
8	Exams or tests or quizzes or assessment	29
9	deadline approaching	23
10	Positive moods and emotions	19
11	seminar	16
12	other modules	15
13	making progress	15
14	desire to learn	15
15	what students did (studying related)	12
16	finishing an essay, assignment, project or homework	12
17	the need to complete an assignment	12
18	teachers and tutors	12
19	physical health	11
20	feedback	11

21	First day of the week or monday or a new week	11
22	rest and sleep	10
23	EAP	10
24	having free time or enough time to study	10
25	friends	10

Appendix 15 – Results of Matrix Queries of Thematic Codes and Positive Motivation Level Change

Results of matrix query of the 25 thematic codes that corresponded most frequently with a +4 change in motivation level from the previous day (all journals)

	Thematic code	Number of times the thematic code corresponded to a +4 change in motivation level from the previous day
1	assignments, coursework, homework and projects	5
2	Deadline	3
3	classes	3
4	seminar	2
5	desires (good)	2
6	Exams or tests or quizzes or assessment	2
7	friends	2
8	Time or days	2
9	deadline approaching	1
10	finishing an essay, assignment, project or homework	1
11	nice presentation	1
12	reading and looking for sources	1
13	the need to complete an assignment	1
14	class or activity just before EAP class	1
15	EAP	1
16	other modules	1
17	ARC	1
18	desire to learn	1
19	want to have a new beginning	1
20	exam is approaching	1
21	HL or higher level	1
22	library	1
23	marks	1
24	Receiving a good mark	1
25	physical health	1

Results of matrix query of the 25 thematic codes that corresponded most frequently with a +3 change in motivation level from the previous day (all journals)

	Thematic code	Number of times the thematic code corresponded to a +3 change in motivation level from the previous day
1	assignments, coursework, homework and projects	18
2	desires (good)	8
3	Time or days	6

4	essay or paper	6
5	being or feeling – moods and emotions	5
6	Deadline	4
7	seminar	4
8	classes	3
9	Exams or tests or quizzes or assessment	3
10	making progress	3
11	Positive moods and emotions	3
12	desire to be prepared for lecture or class	3
13	presentation	3
14	PPT	3
15	deadline approaching	2
16	reading and looking for sources	2
17	the need to complete an assignment	2
18	First day of the week or monday or a new week	2
19	what students did (studying related)	2
20	revision	2
21	preparing for class	2
22	IELTS or TOEFL	2
23	feedback	2
24	need to work harder	2
25	this study	2

Results of matrix query of the 25 thematic codes that corresponded most frequently with a +2 change in motivation level from the previous day (all journals)

	Thematic code	Number of times the thematic code corresponded to a +2 change in motivation level from the previous day
1	assignments, coursework, homework and projects	61
2	Time or days	22
3	classes	21
4	desires (good)	14
5	essay or paper	13
6	being or feeling - moods and emotions	13
7	Deadline	10
8	seminar	10
9	EAP	9
10	the need to complete an assignment	8
11	other modules	8
12	positive moods and emotions	7
13	First day of the week or monday or a new week	7
14	Exams or tests or quizzes or assessment	6
15	making progress	6
16	feedback	6
17	physical health	6

18	rest and sleep	6
19	deadline approaching	5
20	revision	5
21	desire to learn	5
22	vacation and travel	5
23	having free time or enough time to study	5
24	finishing an essay, assignment, project or homework	4
25	desire to improve	4

Results of matrix query of the 25 thematic codes that corresponded most frequently with a +1 change in motivation level from the previous day (all journals)

	Thematic code	Number of times the thematic code corresponded to a +1 change in motivation level from the previous day
1	assignments, coursework, homework and projects	112
2	classes	38
3	Exams or tests or quizzes or assessment	36
4	being or feeling – moods and emotions	35
5	Time or days	30
6	desires (good)	28
7	essay or paper	27
8	other modules	27
9	Positive moods and emotions	19
10	physical health	19
11	Deadline	18
12	rest and sleep	18
13	feedback	15
14	seminar	13
15	friends	13
16	making progress	11
17	having free time or enough time to study	11
18	math (if not specified like calculus)	11
19	weather	11
20	IELTS or TOEFL	11
21	deadline approaching	10
22	desire to learn	10
23	teachers and tutors	10
24	what students did (studying related)	10
25	nice weather	10

Appendix 16 – Pattern and Structure Matrices of Exploratory Factor

Analysis of Demotivation Questionnaire

Pattern Matrix

Item	Component					
	1	2	3	4	5	6
29. Staying up late	.730					
25. Not getting enough sleep	.719					
31. Getting sick	.583					
18. Having a lot of deadlines in the near future	.459					.400
11. Feeling Tired	.458					
15. The effect of my classmates on me		.854				
16. The effect of my friends on me		.811				
14. The effect of my group-mates on me		.809				
26. The effect my EAP teacher has on me		.673				
23. The effect my roommates have on me		.661				
33. The effect of the environment in my dormitory or apartment has on me		.517				
4. When the weather is too cold			-.789			
1. When the weather is too hot			-.767			
17. When the weather is bad			-.760			
6. Feeling anxious or worried				-.764		
7. Feeling sad				-.704		
3. Being uncertain about how to make progress on an EAP assignment				-.669		
2. Being in a bad mood				-.526		
28. Feeling frustrated or upset	.413			-.514		
32. Feeling unsure about an EAP exam				-.494		
24. Having a difficult EAP assignment				-.456		
5. Having lots of classes on the same day						
10. Finding it difficult to understand the lecturer's English (in classes other than EAP class)						
9. Playing mobile phone games					.724	
30. Playing video games					.683	
13. Watching TV series					.616	
8. Having no EAP class						.660
20. Finishing an EAP exam						.639
12. Having no assignment to work on						.624
19. Having no plan to study EAP						.549
22. Having a heavy workload in classes other than EAP class						.492
21. Having no goal related to English						.483
27. Exams related to classes other than EAP class						.420

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

Structure Matrix

Item	Component					
	1	2	3	4	5	6
29. Staying up late	.730					
25. Not getting enough sleep	.719					
31. Getting sick	.583					
18. Having a lot of deadlines in the near future	.459					.400
11. Feeling Tired	.458					
15. The effect of my classmates on me		.854				
16. The effect of my friends on me		.811				
14. The effect of my group-mates on me		.809				
26. The effect my EAP teacher has on me		.673				
23. The effect my roommates have on me		.661				
33. The effect of the environment in my dormitory or apartment has on me		.517				
4. When the weather is too cold			-.789			
1. When the weather is too hot			-.767			
17. When the weather is bad			-.760			
6. Feeling anxious or worried				-.764		
7. Feeling sad				-.704		
3. Being uncertain about how to make progress on an EAP assignment				-.669		
2. Being in a bad mood				-.526		
28. Feeling frustrated or upset		.413		-.514		
32. Feeling unsure about an EAP exam				-.494		
24. Having a difficult EAP assignment				-.456		
5. Having lots of classes on the same day						
10. Finding it difficult to understand the lecturer's English (in classes other than EAP class)						
9. Playing mobile phone games					.724	
30. Playing video games					.683	
13. Watching TV series					.616	
8. Having no EAP class						.660
20. Finishing an EAP exam						.639
12. Having no assignment to work on						.624
19. Having no plan to study EAP						.549
22. Having a heavy workload in classes other than EAP class						.492
21. Having no goal related to English						.483
27. Exams related to classes other than EAP class						.420

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 15 iterations.