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An Examination of EFL Learning Motivation in Japanese Engineering Students

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Abstract

The studies contained in this folio sought to assess English as a foreign language (EFL) learning motivation in Japanese engineering students. While a great deal of research has been conducted into language learning motivation in recent years, little inquiry has explored the specific motivational characteristics of this population of learners. Due to the various challenges inherent in assessing a phenomenon as complex as language learning motivation, a folio was chosen due to its utility in providing multiple perspectives through the use of a variety of theoretical and methodological approaches. Of the four studies presented in this folio, the first two conducted (Elements 3 & 4) were exploratory in nature. Due to the dearth of empirical inquiry into the specific motivational characteristics of Japanese engineering students learning EFL, these studies represent foundational research as they sought to explore, establish, and examine some of the overall motivational characteristics of this segment of learners. The initial two studies conducted were approached from two distinct methodological paradigms. The study presented as Element 3 was conducted from a traditional quantitative perspective, measuring many of the established motivational variables that have come to be considered foundational in the field. The findings revealed significant variations across yearly cohorts in a number of variables, and an inconsistent motivational core in the learners, with participants expressing positive attitudes and desire toward English learning, but low motivational intensity. Participants across all cohorts were also demonstrated to have high instrumental and international orientations. The second exploratory study (Element 4) set out to evaluate and explore how and why EFL motivation changes in Japanese EFL learners over time. This study was qualitative in nature, assessing motivational change longitudinally over a two year period through semi-structured interviews. Results indicated that students experienced fluctuations in their EFL learning motivation both prior to, and during, university. These fluctuations were attributed to a variety of factors including variables within the learning environment, future career considerations, changing academic priorities, feelings of social-responsibility, outside activities, and variations in self-efficacy related to class difficulty. Drawing on the results of the first two exploratory studies, this folio's central study (Element 2) was designed to assess the impact of a single classroom environmental factor, instructional materials, on the EFL learning motivation of Japanese engineering students. This mixed-method study examined learners' motivational responses to two different genres of instructional materials (general communicative EFL materials, and English for Specific Purposes (ESP) materials).

Data were collected using Keller's (2010) Instructional Materials Motivational Survey (IMMS), short post-class questionnaires, instructor observations, and semi-structured interviews. Data collected across these instruments indicated that learners preferred ESP materials due to their perceived relevance, appeal, necessity, and ease of use. Additionally, instructional materials' genre, characteristics, content and design features, as well as individual and group factors, contributed to a preference for ESP materials. Element 5 describes a study which used adapted instruments from the central study to evaluate a different set of materials and instructional design with the target segment of learners. Using a questionnaire consisting of a modified version of the IMMS and open-ended items, the study sought to evaluate learners' motivational response to an online extensive reading program. Results revealed positive endorsement of the four cognitive variables represented in the IMMS, as well as provided insight into learners' graded reader preferences. Combined, the four studies presented in this folio shed light on the specific EFL learning motivational characteristics of Japanese engineering students, and provide insight into the types of curricular choices that may contribute to more positive learning behaviours and attitudes that promote motivational engagement in the classroom.

Certification of Dissertation

I certify that the ideas, experimental work, results, analysis, software and conclusions reported in this folio are entirely my own effort, except where otherwise acknowledged. I also certify that the work is original and has not been submitted for any other award, except where otherwise acknowledged.

Michael P. Johnson

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Signature of Candidate Date

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Signature of Supervisors Date

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Date

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Element 2. Formal Research Report i-142
Thesis: Examining the Role of ESP and EFL Instructional Material Genres in Japanese Engineering Majors' Foreign Language Learning Motivation

Element 3. Published Paper 1: Journal Article 143-167
Johnson, M.P. (2012). Examining EFL motivation in Japanese engineering students. *Asian ESP Journal*, *8*(2), 79-102.

Element 4. Published Paper 2: Book Chapter 168-185
Johnson, M.P. (2013). A longitudinal perspective on EFL learning motivation in Japanese engineering students. In M. Apple, D. DaSilva, & T. Fellner (Eds.), *Language learning motivation in Japan* (pp. 189-205). Bristol: Multilingual Matters.

Element 5. Conference Proceedings Paper 186-209
Johnson, M.P. (2014). Assessing curricular alternatives: Graded readers and EFL learning motivation in non-English majors. *Conference Proceedings for the 12th Annual Hawaii International Conference on Education* (pp. 228-251). Honolulu, HI.

[Analytical Thematic Statement]

Conceptual Overview

旅が 95%終わっても、まだ半分だ。

"When you have completed 95 percent of your journey, you are only halfway there."

(Japanese Proverb)

"Trying to understand how motivation works is like herding cats; it's like carrying a futon mattress down a set of stairs; or picking chewing gum out of your hair. It's an unpredictable, awkward, and sticky proposition".

(Barker, 2005)

Introduction

Embarking on a research project over an extended period of time is a daunting challenge. Particularly difficult is the notion of 'completing' your research as the more questions you answer, the more seemingly arise. Particularly with a research topic as complex as foreign language (FL) learning motivation, it can be difficult to address all its relevant factors and variables in a single study (Dörnyei, 2001). A folio represents one means for addressing this issue as it permits examination of the subject from a number of theoretical and methodological perspectives through multiple forms of inquiry. An additional benefit of this approach is that it fosters a dynamic research process whereby its constituent components can be validated and contribute to further theorizing and subsequent inquiry. For these reasons, the process of compiling a collection of thematically-related studies appears ideally suited for examining the respective layers of a multidimensional complex phenomenon such as language learning motivation. These salient features of folio-based research led to it being selected as a means for assessing English as a Foreign Language (EFL) learning motivation in a specific population of learners. More specifically, this folio set out to examine EFL

learning motivation in Japanese engineering students. This population of language learners has been the focus of comparatively little empirical inquiry in motivation research (Johnson, 2009). The dearth of information on these learners suggests a need for both general and specific inquiry; both in terms of their general EFL learning motivational characteristics, and, more specifically, how classroom variables initiate and sustain motivated learning behaviours. The four studies that constitute this folio represent a means for addressing these perceived needs. The two exploratory studies (Elements 3 and 4) demonstrate both learners' general overall motivational characteristics, and how and why these characteristics develop and change over time, while two additional studies (Elements 2 and 5) reveal the effects of specific curricular interventions on learner motivation. These findings both inform and direct educators in better addressing the complex problem of motivation in foreign language learners, and further reveal how the process of compiling a collection of related studies can contribute to the establishment of knowledge structures that can become a touchstone for further exploration.

Enhancing the Research Process and Addressing Complexity

Graduate research has been described in terms of being a journey over which not only is a significant contribution to the body of knowledge in a particular area produced, but equally importantly, the graduate student learns, develops and grows into a productive researcher (Mackenzie & Ling, 2009; Rallis & Rossman, 2012; Rudestam & Newton, 2007; Schwartz McCotter, 2001). The research journey is not a linear affair, but is rather recursive. Rudestam and Newton's (2007) research wheel (Figure 1) demonstrates the recursive nature of the research process as it depicts how a conceptual framework develops out of reviewing literature and theory formation, and how these are recursively tied to hypothesising, data collection, analysis, and proposing while the researcher is continuously drawing inductive and deductive inferences that inform decisions and conclusions. As Mackenzie and Ling (2009) explain, the research process is punctuated by details, delays, and discoveries; each of which provide their own unique learning opportunities and insights.

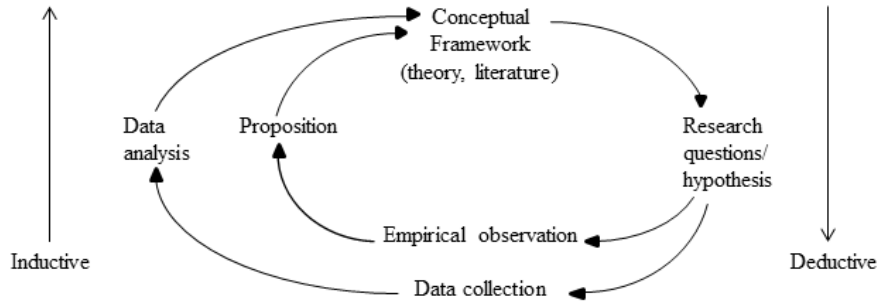

Figure 1. The research wheel (Rudestam & Newton, 2007 p. 5).

Producing a collection of studies related to a central theme provides a unique opportunity to address and explore new questions and directions as they arise. In particular, preliminary studies can contribute to the existing body of knowledge in a particular research area producing findings which the researcher can then draw upon in further hypothesizing and theorizing. In terms of this folio, the first two studies conducted (Elements 3 and 4) sought to describe foundational motivational characteristics of the target population as a means of addressing a perceived dearth of information in the literature reviewed. These studies not only contributed to a research base for theorizing and approaching the central study (Element 2), the process of producing and publishing these papers also contributed greatly to the authors' development as a researcher. In particular, the feedback provided by journal reviewers and book editors not only provided valuable insight into the soundness of the methods and approaches used, they also provided content suggestions and comments which enabled the author to further expand his specialization within the area of language learning motivation. In addition to contributing to the body of knowledge of EFL learning motivation in Japanese engineering students, these publishing experiences served as an interim validation of the authors' work. This type of validation is a particular strength of the folio experience, and permitted for fluidity between studies as the author moved from a place of validated conclusions onto exploring the topic in new theoretical and methodological directions. The relationship between elements is visually represented in Figure 2, where the work done in the preliminary studies (Elements 3 and 4) can be seen to influence the main study (Element 2), which in turn had a direct influence on the production of the fourth study (Element 5). The fluidity between these studies speaks to the inherent flexibility and opportunity of folio research, in addition to

its power in contributing to a research process that encourages exploration of new questions and opportunities as they arise.

A corollary of being able to investigate a number of related thematic strands is the opportunity to engage a research topic from a number of distinct methodological and theoretical perspectives. This is particularly useful in addressing complexity in a subject such as FL learning motivation. Language learning motivation has been demonstrated to be a particularly complex phenomenon with a wide variety of internal (cognitive and affective) and external (social, cultural, learning environmental), variables having been shown to affect motivation in learners (Dörnyei, 2006; Gardner, 1985; Gardner & MacIntyre, 1992; 1993; Horwitz, 1990). Adding to this complexity is the fact that motivation varies across individual learners (Dörnyei, 2006; 2009; Dörnyei & Skehan, 2003; Skehan, 1989; 1990) and changes within specific individuals over time (Dörnyei & Otto, 1998; Johnson, 2013; Nitta, 2013; Verspoor, Lowie, & Van Dijk, 2008; Ushioda, 1996; 2001). While such complexity might be difficult to address in a single study, a folio presents a unique opportunity to mitigate the limitations of any single approach through permitting multidimensional inquiry.

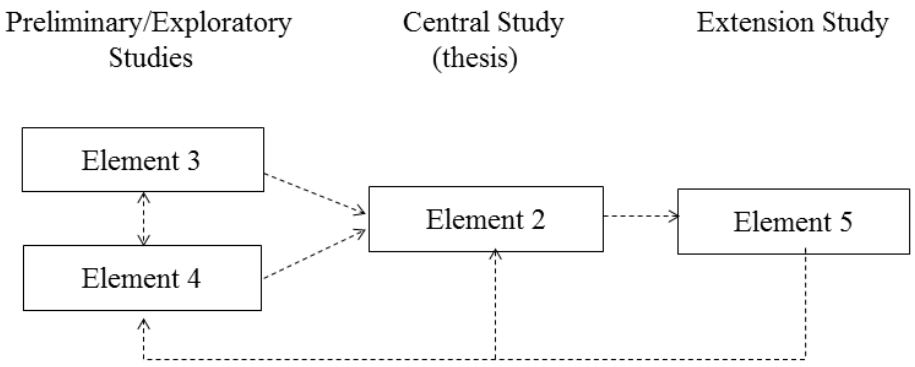

Figure 2. A visual representation of the relationship between folio elements.

The use of multiple research approaches and perspectives has been demonstrated to be an effective means for examining complex phenomenon in educational research (Creswell, 2009; Creswell & Plano Clark, 2007; Haggis, 2008; Morgan, 2007). In terms of methods, an appreciation for complexity in learning has informed a steady movement towards mixed and more inclusive research approaches (Davis & Sumara, 2008; Denzin & Lincoln, 2000; Kincheloe & Berry, 2004; Lincoln,

2001; Morrison, 2008; Rogers, 2012). A particular advantage of such approaches is that they permit multidimensional inquiry through which the researcher, through feedback looping, can engage different forms of knowledge (Berry, 2004). According to Berry (2004), this process promotes autopoeisis as the researcher self-produces independent knowledge structures through the sum of multi-perspective inquiries. The process inherent in producing and relating these varied forms of knowledge also permits new ontological perspectives to unfold, perspectives which promote a more inclusive and nuanced understanding of complex learning phenomenon (Haggis, 2008: Byrne, 1997). This folio attempts to address the complexity of language learning motivation through establishing its own knowledge structure that informs and gives direction to the studies from which it is comprised. While the studies have their own particular foci, and are conducted from either distinct, or mixed, theoretical and methodological perspectives, they all loop back and provide important broad and specific insights into the motivational characteristics and behaviours of Japanese engineering majors learning EFL. The distinct, and collective, importance of the studies comprising this folio will be discussed within the element summaries below.

Folio Element 2

The second element represents the central study of this folio. Its goal was to evaluate the effects of instructional materials on the EFL learning motivation of Japanese engineering students. The perceived need for this study was derived from several sources. First, both a broad review of language learning motivation research and two preliminary studies (Elements 2 and 3) into the general characteristics of this segment of learners indicated that classroom factors were an important variable in EFL learning motivation. Additionally, it was further observed that there was a dearth of both mixed-method and classroom-based studies in language learning motivation research (as commented on by Dörnyei, 2001). These observed needs inspired the development of a within-subjects repeated measures design which compared learners' motivational responses to two distinct genres of instructional materials: general communicative EFL materials and English for Specific Purposes (ESP) materials. To assess students' motivational responses to these two genres of materials, a mixed-method design consisting of four data collection instruments was used. These instruments included Keller's (1987, 2010) Instructional Materials Motivational Survey (IMMS), short weekly semantic differential item questionnaires, semi-structured

interviews, and instructor post-class observation notes. Due to the inherent complexity of measuring language learning motivation in the classroom, this particular collection of quantitative and qualitative approaches was chosen due to its perceived utility in describing learners' impressions, attitudes and behaviours from a number of perspectives. Results indicated that learners positively endorsed both genres of materials, but preferred ESP materials overall. Data garnered from the IMMS provided insight into this preference with learners indicating a cognitive preference for the perceived relevance of the ESP materials. These preferences were supported by short post-class questionnaires with learners indicating that they found the ESP materials to be significantly more valuable, appealing, and necessary, as well as being easier to use. Interview results both complemented and expanded on these findings with learners voicing a preference for ESP materials due to their perceived relevance, usefulness, and novelty, as well as the overall present and future professional, academic and personal value they represented. Observational data provided a valuable perspective on how materials influenced motivational engagement within the classroom, particularly in regard to how learners responded to instructional materials' type, content, and characteristics, as well as individual and group factors within the classroom. The complementary nature of the data collected from these instruments served to indicate not only learners' instructional material preferences, but also provided explanatory insights into these preferences that can serve educators in choosing appropriate curricular interventions for Japanese engineering students learning EFL. In doing so, the study firmly situates language learning motivation research in educational practice, a direction identified as extremely important in the field of motivational inquiry (Dörnyei, 2001; Oxford, 1996; Oxford & Shearin, 1994).

Folio Element 3

The third element of this folio contains the first of two exploratory studies conducted to gather general information on the motivational characteristics of Japanese engineering students learning EFL. It was carried out from a traditional quantitative perspective, examining a number of distinct motivational variables. This positivist approach is representative of the type of language learning motivational research pioneered by Gardner and his associates (Gardner & Lambert, 1972; Gardner, 1985), and represents the kind of study the author encountered most frequently during a preliminary review of the literature. As this type of study has been demonstrated to be

effective in describing the presence and relative strength of important motivational variables, it was thought that it would serve to determine the general motivational characteristics of this segment of learners. In order to obtain broad insights into this population of learners, the study sought to comparatively evaluate EFL learning motivation cross-sectionally across different cohorts of engineering students in a single institution. Data was collected using a questionnaire comprised of eleven separate scales adapted from Gardner's (1985) Attitudes and Motivation Test Battery (AMTB), Horwitz, Horwitz and Cope's (1986) Foreign language Classroom Anxiety Scale (FLCAS), in addition to locally developed scales. Results revealed an inconsistent motivational core in learners where, while they expressed a strong desire to learn English, they did not exhibit the motivational intensity necessary to learn the language. Participants were also shown to also be apprehensive about speaking English, to be anxious about English assessment and to have low levels of confidence in learning and using English. Additionally, learners negatively evaluated classroom environmental factors such as teachers and the content of EFL instruction. More positively, strong instrumental and international orientations were revealed. In comparing cohorts, learners' motivational core (consisting of attitudes, desire and intensity) was significantly higher in first year students, while these learners also reported a significantly lower evaluation of the classroom environment. As the questionnaire was filled out during learners' first week of university studies, these sentiments appear to reflect attitudes freshman learners formed in their pre-tertiary EFL learning experiences. This contrasts with third year students who reported lower levels of communication anxiety and more positive sentiments toward the classroom learning environment. These varied findings contribute important information on the motivational characteristics of this segment of learners. However, due to the inherent limitations of this type of approach, particular in terms of describing how and why such characteristics were formed, these findings are best considered together with the qualitative insights presented subsequently in Element 4. Element 3 was published in the Asian ESP Journal (Johnson, 2012). Its publication in this particular journal supports the need for research into domain-specific motivational characteristics of learners such as engineering students learning EFL.

Folio Element 4

The fourth element of this folio was, like the third element, exploratory in nature. Its goal was to gain insight into how and why EFL motivation develops and changes in Japanese engineering students. The study was conducted from an interpretivist

perspective, measuring motivational change in learners over a two year period through data collected with semi-structured interviews. Qualitative research of this kind has grown in popularity in recent years due to its utility in providing the type of thick explanatory information on language learning motivation that provides deeper insights into learning phenomenon and better facilitates the development of motivational interventions (Dörnyei & Ushioda, 2011). Due to these characteristics, such approaches are seen as more "educationally friendly" than traditional positivist methods (Dörnyei, 2001). In this particular study, a total of ten Japanese engineering students were interviewed in their first and second years of study. Data collected from these interviews were subjected to two-step content analysis, and subsequently used to construct a thematic network (Attride-Stirling, 2004) to visually represent the developments and changes in the participants' motivation over their first year of tertiary study. Results indicated that the participants experienced significant fluctuations both prior to, and during, university. These fluctuations were attributed to a variety of factors including aspects of the learning environment, future career considerations, changing academic priorities, feelings of social-responsibility, outside activities, and variations in self-efficacy related to class difficulty. These results provide explanatory insight into some of the findings from the study presented in Element 3. One important insight was the role of social responsibility and investment in the development of motivational orientations; this provides a possible explanation for changes in the motivational core of learners between cohorts observed in Element 3. Learners' negative pre-university learning experiences, particularly with content and instructors that focused on entrance exams and rote-learning methodologies, were cited as a reason for participants' negative attitudes towards the language learning environment. However, as second year interview data indicated, positive classroom experiences, particularly classroom features and exposure to new EFL learning content and methods, produced more positive attitudes towards classroom learning. The results of this study indicate that motivation is fluid and dynamically evolves as learners encounter different classroom content and instructional methods and they re-evaluate the importance of English in their personal, academic and professional lives. Element 4 is presented in this folio in its final published form, as a chapter in the recently published book *Language Learning Motivation in Japan* (Johnson, 2013). Its presence amongst other articles from leading scholars in the field of language learning motivation speaks to the legitimacy and current importance of longitudinal qualitative inquiry in this area of research.

Folio Element 5

The fifth element of this folio describes a study that was undertaken as an extension of the work done in the main study (Element 2). Whilst conducting the main study, a workplace opportunity arose in which the flexibility and adaptability of one of instruments used in that study could be explored. The goal of the study was to evaluate learners' motivational response to the use of graded readers in conjunction with an online evaluation system. Keller's IMMS was perceived to be suitable for this type of task, however, the items and scales had to be rewritten and reorganized in manner appropriate to the content and administration of the class. Additionally, open-ended items were added to permit collection of the type of rich descriptive data necessary to adequately describe learners' experiences with the graded readers and the online assessment system. Survey results revealed positive endorsement of the four key cognitive areas central to learning motivation (attention, relevance, confidence, and satisfaction). Further, the open-ended items demonstrated an overall positive endorsement of graded readers and were particularly valuable in providing descriptive insights into learners' preferences in regard to specific genres, content features and layout characteristics. The paper presented as Element 5 in this folio was published within the conference proceedings for an international education conference (Johnson, 2014). The process of producing and sharing such research with colleagues represents a particularly important means for reassessing the nature of FL learning motivation, as well as an opportunity for reconsidering and reaffirming how classroom-based inquiry can contribute to the on-going development and expansion of research in this area.

Tying the Elements Together

The goal of this folio was to examine the general and specific motivational characteristics of Japanese engineering students learning EFL. The studies comprising the folio are tied broadly by this goal and are specifically linked by how their respective focus, approach, and administration serve to address motivation from a number of different, but complementary, perspectives (see Table 1). Central to achieving this goal was the participation of 615 (n=615) individual Japanese engineering majors (there was no cross-study participation) whose feedback and perspectives across the four studies provided rich insights into motivation and FL learning. In terms of focus, the individual studies assess both general motivational traits as well as situated classroom motivation

exhibited by learners as they interact with specific curricular materials. These perspectives are valuable in that they provide insight both into the learners' general motivational orientations and into how specific aspects of the instructional environment can influence motivational behaviours. The collection of positivist, interpretivist, and mixed-methods approaches used across studies represents the full array of methodological and theoretical approaches currently being used in language learning motivational research (Dörnyei, 2001; Dörnyei & Ushioda, 2011). As each has been demonstrated to reveal different characteristics of motivation in learners (Dörnyei, 2001; Dörnyei & Ushioda, 2011), the combination serves to provide a fuller representation of motivation in the target population of learners. These approaches were carried out with comparative, cross-sectional, longitudinal, and mixed administrative protocols which also provide a number of temporal and contextual perspectives to the motivational profile of these learners. Combined, the range of foci, approaches and administration patterns utilized provide a comprehensive picture of the general EFL learning motivational characteristics of Japanese engineering students and insight into how and why motivation develops and changes within learners in the classroom.

Table 1
A Comparison of Folio Elements

	Elements			
	Formal Research Report (Element 2)	Published Paper 1 (Element 3)	Published Paper 2 (Element 4)	Published Paper3 (Element 5)
Focus	curriculum classroom	general motivational characteristics	general motivational characteristics	curriculum classroom
Approach	mixed-methods	quantitative	qualitative	mixed-methods
Theoretical Orientation	cognitive	social psychological affective cognitive	cognitive affective	cognitive
Administration	mixed: longitudinal & cross-sectional	cross-sectional comparative	longitudinal	cross-sectional
Form	formal report	journal article	book chapter	conference proceedings

In terms of the individual studies presented, the first two exploratory studies (Elements 3 and 4) ascertained important information on learners' general cognitive and affective motivational characteristics, as well as their social psychological orientations. They reveal how these characteristics differed across cohorts, and how and why they developed and changed in learners over time. These findings contribute to motivational research in a number of ways. They demonstrate that single paradigm studies can be particularly useful in ascertaining exploratory information pertaining to discreet motivational characteristics in learners. Additionally, they contribute to an emerging base of research exploring FL learning motivation in engineering students (Apple, Falout, & Hill, 2013; Johnson & Johnson, 2012).

The exploratory studies supported the main study of the folio (Element 2) in demonstrating the importance of the classroom environment, particularly class content, in motivating learners. Element 2 provides insight into cognition and motivation as learners interact with different genres of instructional materials. It further demonstrates the value of mixed-method classroom-based studies in evaluating the motivational value of curricular interventions. Building on these findings, Element 5 demonstrated that the instruments used in the main study were flexible enough to be adapted to evaluate other instructional designs, and revealed another curricular alternative that proved to promote motivation in the target segment of learners. These elements make an important contribution to the area of classroom motivation in language learning, particularly in terms of instructional design and situated motivation. As these areas have been underexplored in the area of language learning motivation (Dörnyei, 2001), their results serve to provide direction for future classroom-based research.

As a whole, these studies reveal that findings derived from separate studies both lead to and support further inquiry, and that the fluidity of addressing questions raised in preliminary findings with subsequent inquiry is indeed a rewarding and insightful means of engaging the research process. Language learning motivation is an exceedingly complex phenomenon, one which may never be completely described or solved. However, through folio research it can be engaged in a rich and multidimensional manner which provides important insights and perspectives that can guide educators in better meeting the needs of specific populations of language learners.

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[Formal Research Report]

Examining the Role of ESP and EFL Instructional Material Genres in Japanese Engineering Majors' Foreign Language Learning Motivation

Michael Johnson

Abstract

This study set out to evaluate the effects of instructional materials on English as a Foreign Language (EFL) motivation. More specifically, it sought to examine how two specific genres of instructional materials, general communicative EFL and English for Specific Purposes (ESP) materials, influenced the learning motivation of Japanese engineering students. In order to assess learners' motivational engagement, a within-subjects repeated measures design was used in which the two genres of materials were taught to a sample of fifty-five (n=55) participants in alternating class sessions over a twelve-week period. Due to the complexity inherent in assessing motivation in the classroom, a mixed-method approach was chosen in order to provide data of sufficient breadth and depth which would facilitate an adequate understanding of participants' attitudes and behaviours as they engaged the target materials. Instruments used to collect data included Keller's (1987, 2010) Instructional and Materials Motivational Survey (IMMS), short weekly semantic differential item questionnaires, semi-structured interviews, and instructor post-class observation notes. The IMMS was positively endorsed overall for both genres of materials, with satisfaction and relevance scales being most highly endorsed. Paired-samples *t*-tests revealed a statistically significant difference across genres in the relevance scales, which were endorsed significantly higher with the ESP materials. Statistically significant differences between individual items across genres were observed across relevance, confidence and satisfaction items, all favouring the ESP materials. All scales demonstrated positive strong inter-correlations with the exception of relevance and confidence scales. Results of the weekly post-class questionnaires revealed overall positive endorsements of all adjectives, with the highest overall means coming from the necessary, absorbing, enjoyable, and meaningful ESP scales. Weekly results subjected to one-way analysis of variance (ANOVA) indicated significant differences between easy, appealing, necessary and valuable scales with each of these items peaking in weeks where ESP materials were used in instruction. A single round of semi-structured interviews was conducted with a self-selected subgroup of ten (n=10) participants from the original sample. The data derived from these interviews were subjected to two-step content analysis. Results revealed a majority preference for the ESP materials due to their perceived relevance, usefulness, and novelty, as well as the overall present and future professional, academic and personal value they represented. These results also revealed a preference for the types of activities and tasks comprising the ESP materials. Instructor post-class observation notes were collected over the twelve weeks of instruction. Data derived from these observations were subjected to content analysis and

produced results indicating that motivated engagement was affected by instructional materials' type, content, and characteristics, as well as individual and group factors within the classroom. Overall, ESP material content appeared to more strongly influence the degree of engagement in learners, with technical and engineering content drawing particular interest. The findings garnered from the four data collection protocols indicated that, while learners positively endorsed both genres of materials, ESP materials were preferred overall due to their content and characteristics. The paper concludes with a discussion of the teaching and research implications of these results.

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Acronyms and Abbreviations

a	Chronbach's Alpha
AMTB	Attitudes and Motivation Test Battery (Gardner, 1985)
ARCS (Model)	Attention, Relevance, Confidence, Satisfaction (Keller, 2009)
EFL	English as a Foreign Language
ESL	English as a Second Language
ESP	English for Specific Purposes
ETS	Educational Testing Service
FLCAS	Foreign Language Classroom Anxiety Scale (Horwitz, Horwitz & Cope, 1986)
FL	Foreign Language
ID	Individual Differences
IMMS	Instructional Materials Motivation Survey
L2	Second Language
LL	Language Learning
m	mean
Monbusho (MEXT)	Japan's Ministry of Education, Sports Culture and Science
n	number
PASW	Predictive Analytics Software
PBL	Problem-Based Learning
SD	Standard deviation
TL	Target Language
TOEIC	Test of English for International Communication
WTC	Willingness to Communicate

Chapter 1
Introduction

1.1 Background of the Research

Learning a foreign language is a challenging endeavour. The limited numbers of students who actually achieve functional fluency in a foreign language through traditional classroom instruction attest to this difficultly (Bley-Vroman, 1990). For foreign language educators, finding a means to improve such learning outcomes is an ongoing challenge. One significant area of focus that has emerged in recent decades has involved identifying and orienting instruction toward learners' particular individual learning traits. The specific individual characteristics of learners, as identified in Individual Differences (ID) research, include such traits as personality, aptitude, motivation, learning strategies, and learning styles (Dörnyei, 2005, 2006; Dörnyei & Skehan, 2003; Skehan, 1989, 1990). Research has established that the presence of these characteristics varies in individual learners and contributes to differing degrees of success in language learning (Dörnyei, 2005; Doughty & Long, 2003; Oxford, 1992; Robinson, 2001; 2002). While each of these characteristics has received a great deal of research attention, motivation has been perhaps most widely examined. Over the past fifty years, motivation has become established as an important language learning variable, over which time its theories, models and methodological approaches have steadily evolved and developed (Barker, 2005; Dörnyei, 2001; Hotho & Reimann, 1998; McGroarty, 1998; Spolsky, 2000). One area which has been shown to strongly influence learning motivation in both general education and second language (L2) learning research is the classroom environment, including such factors as the instructor and instructional content (Boekaerts, 2001; Dörnyei, 1994; Dörnyei & Otto, 1998; Gorham & Christophel, 1992; Gorham & Millette, 1997; Hotho & Reimann, 1998; Julkunen, 1989, 2001). In the studies above, these factors have been shown to have a particularly important effect on learners' cognitive and affective states, areas which have risen to the

forefront of recent L2 motivational research (Dörnyei, 2005; Dörnyei & Ushioda, 2011).

Considering the established importance of classroom variables on L2 learner motivation, this study sets its focus on examining the motivational influences of instructional materials on foreign language learners. This particular focus has been chosen for several reasons. First, as an English as a Foreign Language (EFL) instructor, the researcher has observed over his career how students appear to be more motivated by some instructional materials than others. While relying on such anecdotal observations for textbook selection in the past, a more systematic and informed assessment approach would provide a more reliable means for choosing instructional materials that motivate learners (Ellis, 1997; Johnson et al., 2008). A number of survey articles and position papers have identified both the potential value, and relative dearth, of research into the motivational impact of instructional materials on L2 learners (Crookes & Schmidt, 1991; Dörnyei, 2001; Skehan, 1990). Considering the important role instructional materials play in numerous comprehensive models presented in Dörnyei (1994), Dörnyei and Otto (1998), and Gardner (1985), more focused and explicit examination certainly seems warranted, particularly as it appears to be one of the more actionable areas for developing motivational interventions.

The professional context in which this study is set has particular potential relevance for examining the impact of instructional materials on language learning motivation. The participants are exclusively Japanese engineering majors learning EFL. Particularly in Japan, this segment of learners has been shown to have distinct motivational characteristics when compared with students in other academic majors, particularly in terms of motivational orientations (Kimura, Nakata, & Okumura, 2001; Saito, 2007). Motivating such students can be difficult as they generally do not enrol in English classes by choice, but rather do so because such classes are mandatory academic requirements (Tsuchiya, 2006). With such learners it would be extremely beneficial to know if, and why, particular instructional materials have greater motivational appeal, as this would enable instructors to develop and choose materials that more effectively meet learners' interests and needs.

Research into language learning motivation has taken on greater importance as countries around the world have increasingly embraced English language education as a means for promoting competitiveness in an increasingly globalized world (Crystal, 2003; Graddol, 1997; McKay, 2002). Japanese policy documents have stated that

English, as the common international language, is a necessity for Japanese citizens living in the new millennium, and is particularly important as a conduit for international relations in terms of establishing trust between nations and fostering development domestically and abroad (MEXT, 2003). Domestic hiring trends reflect these sentiments as Japanese companies increasingly demand better English from their new employees (Nakamura & Murakami, 2010; Watanabe, 2010). The growing importance of English in Japanese society is also reflected in educational reform where expanding hours and attention are given over to English training across compulsory primary and secondary education (Fujimoto-Anderson, 2006; Mok, 2006). Where English education has until recently spanned six years, from junior to senior high school, this was expanded in 2010 to include the final two years of primary education. In addition to expanding the quantity of compulsory English study, the Japanese Ministry of Education, Culture, Sports, Science and Technology (*Monbusho*) has also set out to address qualitative aspects of English education (MEXT, 2002a, 2002b). In a 2002 White Paper, the Ministry proposed an Action Plan to Cultivate "Japanese with English Abilities". The goal of this policy is to foster balanced English abilities in Japanese English learners, with a specific focus on improving communicative abilities. Specific measures outlined to attain this goal include: improving the quality of English teachers; increasing English learning motivation through the promotion of study abroad programs, the introduction of English listening tests to national university admissions tests, improvement of instructional content through the establishment of specialized English secondary schools, and the introduction of English conversation training in primary schools (MEXT, 2002b, 2003).

Japan's efforts to improve English education are a direct result of perceived insufficiencies in the established system (Gottlieb, 2005; Ota, 1994). One factor contributing to this perception is the nation's results on international achievement tests, particularly its ranking at, or near the bottom of, international and regional tables on the Test of English for International Communication (TOEIC) and the Test of English as a Foreign Language (TOEFL) tests (ETS, 2009; Gottlieb, 2005; Inoguchi, 1999). Also contributing to the perception of an inadequate English education system is Japanese English speakers' inability to actually use the language in any rudimentary or practical way, despite six years of compulsory English education in junior and senior secondary schools (Gottlieb, 2005; LoCastro, 1996). The main reason cited for this lack of practical English skills is the test-oriented nature of English education in Japan (Burden, 2002; Fallout, 2004; Gottlieb, 2006; Kikuchi & Sakai, 2009; Tsuchiya, 2006). Entrance examinations for secondary and tertiary institutions are limited to English skills that are

perceived to be objectively measurable, such as grammar, reading, vocabulary, and more recently, listening (Gottlieb, 2005; Ingulsrud, 1994). The consequence of the exam-oriented instruction is a washback effect across the English curriculum, where teachers primarily teach test-focused English through grammar-translation approaches (Brown, J.D., 1993; Brown & Yamashita, 1995; LoCastro, 1996; Watanabe, 1996). This has resulted in a population of classic false beginners, learners with a somewhat advanced passive knowledge of grammar and vocabulary, but who remain at a beginning level of more productive language skills such as speaking or writing (Hynes, 2002; LoCastro, 1996). A secondary result of Japan's test-oriented English language education system is a great number of learners who enter into tertiary education weary of English language study due to its past focus on exam-oriented learning, including the decontextualized rote memorization of grammar rules and vocabulary, and the widespread use of grammar-translation methodologies (Berwick & Ross, 1989; Burden, 2002; Falout & Maruyama, 2004; Hamada, 2011; Kikuchi & Sakai, 2009; McVeigh, 2001; Tsuchiya, 2006). Such outcomes have inspired extensive inquiry into how English language learning may be better achieved with Japanese learners, and what interventions may encourage and inspire tertiary learners to become more engaged in their English studies. This study is oriented in a similar direction, and it hopes to expand the scope of inquiry into English language learning motivation through a focused examination of how particular elements of instruction affect Japanese learners in the EFL classroom.

1.2 Research Aims and Research Questions

This study aims at examining the impact of instructional materials on the motivational engagement of Japanese engineering students learning EFL. In order to assess the relative motivational attributes of different types of instructional materials, the study examines two specific genres of materials often encountered by the target population of learners, specifically standard communicative EFL, and English for Specific Purposes (ESP), materials. The study's primary objective is to discern which of these two types of materials is more effective in initiating and sustaining motivation in the language learning classroom. Contained within the objective is the goal to develop an assessment method which effectively reveals the relative motivational qualities of specific instructional materials. A secondary goal is to understand why particular materials are preferred over others, as this can serve to identify salient motivational

features that can inform materials selection and development. A final objective is to identify how motivated classroom behaviour is affected by different types of instructional materials. Insight into this relationship can aid both in curriculum selection and in more reflective instructional practice that accounts for motivated behaviours in the classroom. As little research has been conducted into language learning motivation in Japanese engineering students learning EFL, and little in terms of classroom-based experimental inquiry examining EFL learning motivation, it is hoped that this study will provide not only direction for practical materials-based motivational interventions, but will also serve to demonstrate the value of alternative and mixed theoretical approaches and methods in evaluating FL learning motivation.

Pursuant to the goals outlined above, the following research questions have been developed to direct this study:

1: Do Japanese engineering majors have a particular preference toward EFL or ESP instructional materials?

2: How do Japanese engineering majors respond to the different qualities and characteristics of EFL and ESP materials?

3: In what ways do instructional material preferences manifest in behaviour across EFL and ESP genres?

1.3 Definition of Terms

Owing to the complexity of motivation, and the fact that the concept is examined across sociological, psychological and educational domains, it is necessary to define the term as it will be specifically used in this study. This paper sets out to describe student motivation within the language learning classroom context. Accordingly, it is necessary to define the term as it applies to the specific goal. Pintrich and Schunk (2001), in describing motivation in learning as a process whereby goal-directed activity is instigated and sustained, provide a definition that is both general, and sufficiently succinct, to account for the various processes and characteristics that comprise motivation in educational contexts. In defining learner motivation, it is important to delineate the extent to which motivational behavior is exhibited in students in the classroom, as Brophy (1983) explains, “students who are motivated to learn will not necessarily find classroom tasks intensely pleasurable or

exciting, but will take them seriously, find them meaningful and worthwhile, and try to get the intended benefit from them" (p. 200). Working from these descriptions, language learning motivation is defined in this study as activated and sustained goal-directed language learning behaviour.

While the above definition refers to language learning (LL) as a general term, it is necessary to note that it will be at times divided into sub-classifications. Language learning as a general term involves the learning of an additional language in either second (L2) or foreign language (FL) contexts. Throughout this paper second language (L2) learning, that is the learning of an additional language within the target language (TL) community for the purpose of integrating into that community, will be discussed as distinct from foreign language (FL) learning, that is the learning of an additional language primarily within a language classroom in a context where the target language is not widely used in the immediate community (Gass & Selinker, 1994).

As this study involves the evaluation of the relative motivational characteristics of two distinct types of instructional materials, it is also necessary to define each genre for classification purposes. General EFL materials will describe materials that were designed for instructing general English to learners in a setting where English is considered a foreign language. The content of these materials includes tasks, functions, structures, and activities appropriate for general communication in everyday social and educational settings. The other genre of materials examined in this study is English for Specific Purposes (ESP) materials. According to Dudley-Evens and St John (1998) ESP materials have particular absolute characteristics including a design oriented to meet specific needs of learners and a focus on language necessary to engage in activities and tasks within a particular discipline. ESP materials also have a number of variable characteristics which include the discipline they target, the methodology they embrace, their proficiency level, and the context in which the language is used. The ESP materials used in this study were designed specifically for engineering students, and included communicative tasks and content oriented towards the practical use of basic technical English in engineering contexts.

1.4 Overview of Report

To address the research questions above, this report continues on from the introduction with a summary of the development of language learning motivational

theory over the last five decades in Chapter 2. A summary is necessary to define the scope of motivational theory, and to frame the position of instructional materials as a motivational variable therein. It opens by describing the establishment of L2 motivational theory, particularly in regard to the development and widespread use of the social psychological approach. The social psychological approach, which defines motivation in terms of the learner's perceived relationship with the TL community, and its positivist methods, dominated L2 motivational theory until the early 1990s. Discussion then turns to the gradual expansion of theoretical and methodological approaches as motivational research expanded into a wider range of educational contexts. Facilitated by the widespread adaptation and integration of educational and psychological theory, L2 motivational inquiry shifted its focus toward cognitive and affective factors shaping the learner, and began utilizing a wider range of interpretative and mixed-methods approaches which brought new perspectives to L2 learning motivation theory. Also discussed is the expanded importance of classroom motivational variables. These factors, while present in early socio-psychological theories, have taken a more prominent role in recent theories and approaches. The position of instructional materials as a motivational variable within these approaches is then examined from both L2 and general education perspectives. The literature review closes with an examination of FL learning motivational research in Japan. This section specifically highlights how theoretical and methodological approaches have reflected broader trends in the field, while also illustrating how findings appear to vary according to learners at different ages, proficiency levels, and in tertiary studies, across specific majors.

Chapter 3 describes the theoretical and methodological approach derived to assess the motivational impact of instructional materials on EFL learners for this particular study. The four instruments used in data collection, (i.e., short post-class questionnaires, a comprehensive post-semester questionnaire, teacher post-class observation notes, and semi-structured interviews), were chosen due to their perceived utility in describing motivation from a variety of perspectives. This methodological approach has the distinct advantage of permitting triangulation of data, and in doing so contribute to the overall reliability of the findings. The results are presented in the following chapter, Chapter 4, with descriptive and inferential data describing the qualitative and quantitative results of each instrument. Chapter 5 discusses these findings with a distinct focus on their theoretical and practical implications. The report concludes in Chapter 6 with a summary of its important findings, a discussion of its

limitations, an overview of its implications, and suggestions for possible directions for future research.

Chapter 2

Literature Review

2.1 Early L2 Learning Motivational Theory

To fully understand the theories and methods used in current language learning motivational research it is necessary to examine early approaches to the subject as many of these concepts and methods remain foundational in the field. Language learning motivation emerged as a distinct area of research inquiry with the publication of a series of seminal studies examining language learning and motivation from a social psychological perspective (Gardner & Lambert, 1959, 1972). The social psychological approach examines language learning in terms of a learner's relative psychological distance from, or willingness to embrace and integrate with, a particular language community (Gardner & Lambert, 1972; Gardner, 1985b). This approach first gained prominence with a study examining language learning motivational variables and linguistic aptitude in Canadian secondary students learning French as a second language (Gardner & Lambert, 1959). In this particular study the authors developed an "Orientation Index" with which they measured integrative and instrumental orientations in language learners. An integrative orientation has been described as a desire to learn about, interact, and integrate with the target language, its people and community, while an instrumental orientation has been classified as a desire to learn an additional language for utilitarian purposes, such as advancing in one's career (slight variations of these definitions are presented in Gardner, 1985a, 2006; Gardner & Lambert, 1959, 1972). Gardner and Lambert's (1959) seminal study revealed that an integrative orientation was more highly correlated with language learning success, and that integratively-orientated students demonstrated more positive attitudes toward French speakers while exhibiting higher motivational intensity. In a series of subsequent studies summarized in Gardner & Lambert (1972), the importance of an integrative motive in language learning was further supported.

Other findings, such as the importance of the home environment and parental attitudes, as well as the attitudes of the immediate community, also emerged as significant variables tied to the learner's integrative orientation (see Gardner & Lambert, 1972). Drawing upon these findings, and building upon increasingly sophisticated and

refined data collection instruments, Gardner (1985b) developed the socio-educational model of second language acquisition. Within this model, the integrative motive, consisting of individual differences including integrativeness, attitudes toward the learning situation, and motivation, acts as a mediating construct operating between cultural beliefs in the social milieu, and the contexts (both formal and informal) and outcomes (both linguistic and non-linguistic) of learning (Gardner, 1985b). To measure the presence of these variables in language learners, Gardner (1985a, 1985b) developed the Attitudes and Motivation Test Battery (AMTB) a multiple scale questionnaire assessing learners' attitudes and orientations. This instrument has been adapted for use in numerous studies in various national settings (e.g., Bernaus & Gardner, 2008; Gardner & MacIntyre, 1991; Hsieh, 2008; Idrees & Bashir, 2010; Johnson, 2012; Liu, 2007; Masgoret & Gardner, 2003; O'Muircheartaigh & Hickey, 2008; Tremblay & Gardner, 1995) where it has been demonstrated to have reliable psychometric properties (Dörnyei, 2001). The established reliability of the AMTB, coupled with social-educational theory's foundational position in L2 motivational research, has contributed to their widespread theoretical and methodological appeal.

Despite the long-standing pre-eminence of Gardner's socio-educational model and the social psychological approach, it was increasingly criticised in the late eighties and early nineties (Au, 1988; Crookes & Schmidt, 1991; Oxford, 1994; Oxford & Shearin, 1994). One significant issue involved the integrative motive hypothesis; that is the claimed superiority of an integrative motive in motivating students towards successful language acquisition and achievement (Au, 1988). Considering the Canadian bilingual environment in which the theory was initially developed (Gardner & Lambert, 1972), and where the bulk of the early studies took place, social distance from, and desired engagement with, the target language (TL) community represented a legitimate focus for L2 motivational research in that particular context. However, studies conducted in other national settings revealed that instrumental motives could in fact result in higher language learning achievement. Early empirical evidence countering the integrative motive hypothesis included Lukmani's (1972) finding that instrumentally-oriented Indian students achieved higher levels of proficiency, and Oller, Hudson, and Liu's (1977) study which revealed a significant negative correlation between ESL achievement and learners' desire to integrate into the TL culture. These findings were later supported by Dörnyei (1990), and Horwitz (1990), who observed instrumental motivation leading to greater success in EFL learners in Hungary and the Philippines respectively. These studies reveal an important motivational distinction between learners in EFL and ESL settings. Whereas ESL students have an immediate

community with which to interact in the target language, learners in many EFL settings may have little opportunity to use the TL outside the language classroom (Oxford, 1996). The contextual difference between such learners has been revealed in the distinct variables shown to affect their motivational states. For example, a "requirement" variable (Ely, 1986; Warden & Lin, 2000), or motivation derived from being required to study a foreign language as an academic requirement, has come to be considered an important and distinct motivational variable in FL learners. A number of additional variables were also revealed by Clement and Kruidenier (1983), including travel, friendship and knowledge.

The emergence of different motivational orientations and variables called into question the breadth of the social psychological approach. As motivational theory sought to better account for the context of foreign language learning, a number of scholars called for a more classroom- and learner-centric focus. Crookes and Schmidt's (1991) article was seminal in this regard, particularly in its identification of two problems with the established social psychological approach: its narrow scope (in terms of focusing mainly on attitudes towards the target language community), and its failure to distinguish between cognition, motivation and affect, areas of distinct focus in psychological and educational research. The authors argued that the dependency on a single research paradigm was inadequate in describing the complexity of motivation. They proposed a new research agenda drawing upon research perspectives from education and psychology (particularly Keller, 1983; Kuhl, 1986; Maehr & Archer, 1987), and the need to focus on four distinct areas: 1) the micro level (cognitive processing); 2) the classroom level (motivational techniques and activities); 3) the syllabus level (the interact between content and motivation); and 4) the informal level (comprising informal, out-of-class, and long-term learning considerations). In a similar critique of established L2 motivational theory, Oxford and Shearin (1994) called for the development of broader and more eclectic theories. They claimed that such an enhancement was required to account for the wide range of motivation types which were not addressed by social psychological theory, particularly as motivation pertained to cognition in the classroom. To address these areas, they described a number of theories from general, industrial, educational and cognitive developmental psychology which were perceived to have particular relevance to language leaning motivation including needs, instrumentality (expectancy-value), equity, reinforcement, and social cognition theories. Theories and directions described by Crookes and Schmitt (1990) and Oxford and Shearin (1994) have been utilized extensively since the publication of

their articles, and have contributed significantly to expanding the scope of L2 motivational research.

2.2 L2 Motivational Research: Educational and Psychological Perspectives

Psychological theories have found broad application in language learning motivational research. A number of comprehensive models and approaches have integrated multiple psychological constructs (e.g., Dörnyei, 1994; Dörnyei & Otto, 1998; Tremblay & Gardner, 1995; Williams & Burden, 1997), while numerous others have examined specific individual concepts considered relevant to particular learners and contexts (e.g., Ehrman, 1996a; Green, 1999; Hashimoto, 2002; Hsieh & Schallert, 2008; Hsieh & Kang, 2010; Mills, Pajares, & Herron, 2007; Noels, Pelletier & Clement, 2003; Williams, Burden & Al-Baharna, 2001; Yashima, 2002). Theories and constructs most commonly used in L2 motivational research, and those considered most relevant to this particular study, are described below with examples of their application in L2 motivational research.

2.2.1 Self-Determination Theory and L2 Motivational Research

Self-determination theory (SDT) (Deci & Ryan, 1985) is one of the more prominent psychological theories which has been used to describe motivation in language learners. According to Deci, Vallerand, Pelletier, and Ryan (1991), self-determination theory "is concerned primarily with promoting in students an interest in learning, a valuing of education, and a confidence in their own capacities and attributes" (p. 325). This goal is pursued through a focus on "three innate needs: the needs for competence, relatedness, and autonomy (self-determination)" (p. 327). The theory describes motivation in terms of regulatory styles and their associated processes. Regulatory styles include intrinsic motivation, extrinsic motivation, and amotivation. Intrinsically motivated behaviors are those which are engaged in for the inherent interest, enjoyment and satisfaction they provide, and are internally driven. Extrinsically motivated behaviours can be separated into four distinct regulatory styles ranging on a continuum from externally to internally perceived loci of causality. The styles and their associated processes include: external regulation (salience of extrinsic rewards or punishments), introjection (ego involvement, focus on approval from self or others),

identification (consciously valuing an activity, self-endorsement of goals), and integration (hierarchical synthesis of goals). A final regulatory style separate from intrinsic and extrinsic motivation is amotivation which is the state of lacking an intention to act. When amotivated, a person's behaviour "lacks intentionality and a sense of personal causation" resulting from "not valuing an activity, not feeling competent to do it, or not believing it will yield a desired outcome" (Ryan & Deci, 2000, p. 61).

SDT has demonstrated its utility in describing language learning motivation in a number of contexts. Green (1999) demonstrated SDT to be particularly valuable in evaluating motivational characteristics of L2 learners in complex cultural and linguistic environments such as Hong Kong. Drawing on questionnaire data collected from a sample of approximately 2000 university students, Green examined motivational drives in terms of Deci and Ryan's (1985) four categories of regulation (external, introjected, identified, and integrated) as well as an additional locally developed scale, "avoidant". Findings indicated that the majority of participants exhibited identified regulation, and that most were externally regulated when using/speaking English. Beyond general learner motivational characteristics, SDT has also been used to evaluate the influence of teachers' behaviours on learners' regulatory styles. Noels, Clement and Pelletier (1999) examined student perceptions of teachers' communicative styles and their effect on the regulatory styles of participants in a short-term French immersion program. In regard to teachers' communicative styles, less informative and more controlling teachers were found to be linked to lower levels of intrinsic motivation in learners. Other general findings revealed a positive connection between learning outcomes and intrinsic motivation, particularly in terms of reduced anxiety, higher motivational intensity and self-evaluation of competence. In a more recent Canadian-based study, Noels, Pelletier, and Clement (2003) examined motivational orientations in tertiary French as a second language students from an SDT perspective integrating the motivational subtypes and orientations developed by Clement and Kruidenier (1983). Their findings revealed a strong correlation between instrumental orientation and external regulation orientation as well as a high intercorrelation between identified regulation and intrinsic motivation, as well as travel, friendship and knowledge orientations. They also revealed that instrumental and external regulation orientation correlated with perceived autonomy and competence. While the studies above have examined L2 motivation from a pure SDT perspective, others have examined intrinsic and extrinsic regulatory styles as components within more comprehensive and eclectic studies (H. D. Brown, 1990, 1994;

Ehrman, 1996b; Okada, Oxford, & Abo, 1996; Schmidt, Boraie, & Kassabgy, 1996; Wen, 1997; Yihong, Yuan, Ying, & Yan, 2007).

2.2.2 Self-Efficacy in L2 Motivation

A further cognitive approach from general psychology that has been widely applied in L2 motivational research is self-efficacy theory (Bandura, 1977, 1994). An individual's perceived self-efficacy involves the degree to which they believe they can achieve successful outcomes in particular activities and in particular contexts. This is important in learning situations as "people fear and tend to avoid threatening situations they believe exceed their coping skills, whereas they get involved in activities and behave assuredly when they judge themselves capable of handling situations that would otherwise be intimidating" (Bandura, 1977, p. 194). This plays a crucial cognitive role in motivation as perceived future consequences influence the activation and persistence of behaviours. Self-efficacy is comprised of a number of dimensions, including the perceived difficulty level of particular tasks, the degree to which efficacy can be transferred across tasks, and the individual's degree of confidence that they can fulfil a task. These combine to describe perceived efficacy as a multidimensional construct that is context specific, future oriented and is focused on a mastery criterion (Zimmerman, 2000). Self-efficacy operates as a basic cognitive function in causal attributions, outcome expectancy and cognized goals, and as such is essential to a number of other cognitive theories such as attribution theory, expectancy-value theory, and goal theory (Bandura, 1993). In academic contexts, self-efficacy has been shown to be particularly effective in predicting academic achievement (Schunk, 1991).

Within L2 motivational research self-efficacy has been examined as a variable in a number of studies and models where it has either been explicitly examined in terms of self-efficacy theory, or subsumed as a component in broader learning confidence variables or subsystems (Dörnyei, 1994). In either case, this type of inquiry specifically involves the examination of learners' self-perceived degree efficacy in learning and using the TL and how this is related to L2 learning motivation. In a study seeking to expand the scope of Gardner's (1985) social psychological approach, Tremblay and Gardner (1995) examined a number of new psychological constructs in Canadian francophone students learning ESL. The study examined the interrelationships between variables measured in the AMTB, as well as other variables affecting motivational behaviour such as attention, persistence and effort, and motivational antecedents such as

expectancy, self-efficacy, valence, causal attributions and goal setting. Through path analysis, it was revealed that self-efficacy acts as a moderator between attitudes and motivation, where it is influenced by language attitudes and in turn influences motivation. In another study employing a wide range of standardized motivational, personality and proficiency measures, Ehrman (1996b) explored the relationship between motivation, self-efficacy and anxiety in US foreign-service language learners. The results showed that self-efficacy correlated repeatedly with higher speaking and reading achievement. Learners who rated themselves higher than others and expected success in the classroom exhibited higher achievement, particularly in terms of grammar sensitivity. In a study examining motivation and achievement in tertiary French learners in the United States, Mills, Pajares, and Heron (2007) similarly examined self-efficacy within Bandura's (1986) social cognitive framework. Their findings revealed that self-efficacy applied toward self-regulation was a stronger predictor of achievement, and that intermediate students with self-perceived competence in applying metacognitive strategies were more likely to achieve success. They also revealed that despite the fact that male and female learners demonstrated similar levels of achievement, that females displayed higher levels of self-efficacy in terms of both the French language and culture. Combined, these studies demonstrate the significant role self-efficacy plays in L2 motivation, particularly in terms of determining learning outcomes.

2.2.3 Expectancy-Value Theory and L2 Motivation

Similar to self-efficacy theory, expectancy-value theories also examine antecedent cognitive states of learners. However, whereas self-efficacy theory describes behaviour in terms perceived competency in particular tasks or contexts, expectancy-value theories "argue that individuals' choice, persistence, and performance can be explained by their beliefs about how well they will do on the activity and the extent to which they value the activity" (Wigfield & Eccles, 2000, p. 68). Atkinson (1956) established theory in this tradition with his model describing motives in terms of individuals' desire to perform versus their desire to avoid failure. He proposed that those who want to achieve are positively affected by outcome uncertainty or immediate risk, whereas those who want to avoid failure prefer tasks they feel can be easily completed. A more industrially-oriented version of expectancy theory was developed by Vroom (1964), whose Valence, Instrumentality, and Expectancy (VIE) theory

demonstrated the roles of these variables in workplace motivation. Expectancy theories have also been developed to describe motivation in educational settings. Wigfield and Eccles (1992, 2000) and assorted associates (Eccles et al., 1983; Wigfield, 1994), derived an educationally-focused expectancy model which demonstrates the complex web of factors contributing to achievement–related choices in educational settings. In their model, achievement-related choices are directly influenced by expectations of success, and subjective task values (in terms of incentives and attainment value, utility value, and cost). These expectations and values reflect the cognitive and affective state of the individual, particularly in regard to their goals, memories, beliefs, and interpretations of experiences derived within their particular social and cultural milieu. These factors are all seen as contributing to performance, effort and persistence present in achievement-related choices in learners.

Expectancy-value theories have also found application in L2 learning motivation research. In a study examining English learners in Cairo, Schmidt, Boraie, and Kassabgy (1996) determined that expectancy, along with goal orientation and affect, represents a basic dimension for EFL learning. Wen (1997) expanded on the role expectancy plays in achievement in her examination of Asian heritage American students learning Chinese as a foreign language. Data collected through questionnaires revealed that a number of Asian heritage students, particularly those of Chinese heritage, enrolled in Chinese classes because they expected them to be easy. However, if these students did not experience success, they simply quit and did not continue onto higher level classes. Students who adjusted their expectations, and subsequently committed themselves to the challenging reality of learning Chinese, were able to continue onto higher level classes. The results further demonstrated that motivational factors correlated with expectancy theory. In a more comprehensive study, Schmidt and Watanabe (2001) examined expectancy with a construct comprised of self-efficacy, self-assessed aptitude, and anxiety scales in a sample of over 2000 tertiary foreign language learners. Their findings revealed that expectations of success were connected to an approval for more difficult or challenging learning tasks in the classroom, validating Atkinson's (1956) theory within an L2 learning context.

2.2.4 Goal Theories and L2 Motivation

A further cognitive theory that has found its way into L2 motivational research via industrial and educational psychology is goal setting theory (Ames, 1990; Locke &

Latham, 1990). Studies into workplace achievement and goals have indicated that specific, clear, and challenging goals lead to better performance than easy or unclear goals, or a lack of goals altogether (Locke & Latham, 1990). These findings inspired the examination of goals in educational settings, and the establishment of goal orientation theory (Ames, 1992). Within this theory, goals can be differentiated into two classes: mastery goals and performance goals (Ames, 1992). With mastery goals, effort is perceived to result in success, an attributional belief derived from Weiner (1986). Performance goals involve a judgement of one's ability and self-worth which is measured in comparison with the achievement of others. According to Ames (1992), achievement of performance goals is "evidenced by doing better than others, by surpassing normative-based standards, or by achieving success with little effort" (p. 262). Of these two goal orientations, mastery goals are perceived to lead higher educational achievement due to the positive learning experience they promote, whereas the avoidance and negative self-evaluation features of performance goals are perceived as being inherently inferior. However, as pointed out by Pintrich (2000a), both orientations can be divided into approach and avoidance states, indicating that both have the potential to either encourage or discourage motivated behavior.

Within L2 motivational research, the role of goals in motivation has received a significant amount of attention. In a longitudinal qualitative examination of tertiary French as a foreign language learners in Ireland, Ushioda (1996, 2001) revealed that personal goals comprised a fundamental dimension in learner motivation. Specific goals included using French to live or study abroad, for future studies, for future jobs, and to gain a sense of personal achievement. Over time goals were shown to become further defined, particularly in terms of using French in future studies and careers. A recent study by Kormos, Kiddle, and Csizar (2011) expanded upon this dynamic conception of language learning goals with their examination of the role goals play in the formation of attitudes and self-related beliefs in language learners. Their results demonstrated that proximal and distal goals influences the learner in different ways, with attitudes and self-related beliefs changing with learners' self-perceived proximity from future careers or realization of their ideal-self. The process of goal setting in language learning has been formalized in Dörnyei and Otto's (1998) process model of language learning motivation. In their framework the motivational process is comprised of preactional, actional, and postactionable stages which they broadly classify as choice motivation, executive motivation, and motivational retrospection respectively. Goals represent an important motivational function in the preactional stage of language learning where they are determined according to their relevance, specificity, and proximity. The strength and

direction of these goals then contribute to motivated learning behaviour through task engagement, as well as serve as a point of reference in post-learning evaluation. Together, these studies demonstrate that motivation develops and changes with learners' goals as they proceed through the language learning process, particularly according to the perceived proximity of goal achievement.

2.2.5 Attribution Theory and L2 Motivation

Attribution theory incorporates a number of the theories discussed above in describing achievement-oriented behaviour in terms of individuals' causal attributions for past successes or failures. Weiner (1986, 1992) formalized previous work in this area with his attributional theory of motivation and emotion. Within this theory behavioural consequences, in terms of both specific actions and their characteristics, are perceived to be the result of a causal chain of influences traceable back to previous outcomes. These outcomes are ascribed causal explanations by the individual who classifies each in terms of their relative achievement characteristics (ability, effort, strategy, task, etc.), and affiliation characteristics (physical, personality, availability, etc.). These characteristics are also considered by the individual in terms of at least three causal dimensions: locus, stability, and controllability. In response to these factors, the individual is affected both cognitively (in terms of expectancy and degree of confidence) or affectively (in terms of emotions such as surprise, relaxation, anger, gratitude, etc.), which in turn influence the relative degree of motivated behavior the individual commits to similar future tasks.

In language learning motivational research attribution theory has been examined in a number of studies. Examples include studies by Hsieh and Shallert (2008) and Hsieh and Kang (2010) which examined the relationship of attribution, self-efficacy, and performance in foreign language learners in American tertiary and Korean primary settings. Using similar methods, which involved recording attributions directly after students received test results, their major finding was the same despite the difference in educational contexts. Both studies revealed that students with higher self-efficacy attributed failure internally to lack of effort. In a study examining attributions in Bahrain, Williams, Burden and Al-Baharna (2001) revealed a broader number of attributional factors in foreign language learners. In their comparison of teacher and student attributions for success and failure they found that teachers ascribed student success to the quality of instruction and instructional materials as well as students'

effort, motivation, and attitudes towards learning. Students also identified a wide range of contributing factors, including the classroom environment, circumstances, language exposure, support, strategy use, and attitude. This range of attributions is more than is usually ascribed in general educational contexts. One reason for this may be the uniqueness of language learning, and the particular affective and cognitive states that lead to distinct attributions, as suggested in Cochran, McCallum and Bell (2010), who found a number differences in attributions for success and failure in comparing foreign language classes with other academic subjects. Overall, these studies demonstrate that a wide range of factors influence learners' attributions for success and failure in the foreign language classroom, and that these attributions both cognitively and affectively influence language learning motivation.

2.3 Motivation in the Educational Context

Vital to understanding motivation in the classroom context is an appreciation for the distinct motivational characteristics learners bring with them to learning situations. One important distinction that has been identified in general psychology is that between trait versus state motivation (Brophy, 1983, 1987). Trait motivation is perceived to be a stable characteristic in the individual that transfers across domains whereas state motivation is context specific, where the individual will feel either more, or less, motivated according to the perceived characteristics of particular contexts. This is an important distinction in education as it reveals the specificity of motivational characteristics in learners in particular domains (Ames, 1990; Boekaerts, 2001; Brophy, 1994; Turner, 2001; C. Williams, 1994). Thus some learners enter into the classroom environment with antecedent motivational characteristics, while others' motivation will develop according to how they perceive the classroom learning environment. The variety of affective and cognitive factors and variables discussed above are seen as contributing to learner motivation in the classroom and play an important role in a number of comprehensive classroom-focused motivational frameworks, several of which are described below.

2.3.1 Keller's ARCS Model

One influential framework integrating many of the cognitive variables described above is Keller's ARCS Model (Keller, 1979, 1983, 1987, 1999; Gagne,

Wager, Golas, & Keller, 2005). Focusing explicitly on educational contexts, this model measures attention, relevance, confidence, and satisfaction (ARCS) motivational components of instruction. The attention component refers to the degree to which instruction stimulates curiosity and interest in the learner, and is analogous to the initiating stage in motivational theory (Pintrich & Schunk, 2001). Relevance describes the degree to which instruction corresponds with instrumental factors such as learners' goals and motives as well as stimulates prior knowledge. Confidence refers to learners' belief that they can be successful in, and have some degree of control over, the learning process. Relevance and confidence are perceived to be two particularly important aspects of the motivated learning process as they contribute to sustaining motivation (Keller, 2010). Finally, the satisfaction component describes the feeling of reward, whether is be internal or external, engendered by the learning endeavour. The dynamic interaction between these components can be observed in the visual representation of the ARCS model in Figure 1. Within the model, attention, relevance and confidence combine to provide initiating and sustaining motivation in learners through stimulating curiosity and providing positive outcome expectancies and goals. These personal characteristics, combined with abilities, skills and knowledge, as well as environmental influences such as the design, content, and delivery of instruction, combine to influence effort and performance in the learner. Learner performance, particularly learners' ongoing feelings of self-efficacy and achievement, and the degree of satisfaction derived from learning outcomes, feedback into attention, relevance and confidence components. In this way ongoing appraisals of the self and the ability to achieve desired outcomes regulate motivation in the classroom.

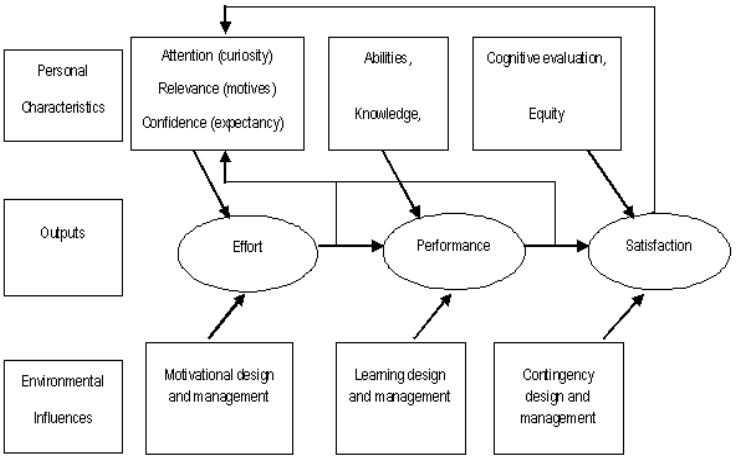

Figure 1. Keller's (1999) macro model of motivation in performance.

2.3.2 Boekaerts' Model of Motivation and Emotion

Boekaerts (1988, 1993) developed a further motivational model which specifically examines learner motivation within the classroom. This framework examines the role of affect in cognition, particularly the effects of positive and negative emotions in contributing to cognition and learning outcomes. Within the model, learners are viewed as continually working toward increasing or gaining skills, or maintaining or restoring well-being. Boekaerts (1988) examined this framework through an empirical investigation in which she measured motivation both prior to, and after task execution. In both instances cognition and emotion were measured in terms of perceived importance, relevance, difficulty, competence, attractiveness, effort investment, and emotions such as happiness, anxiety, and anger. Post-task measures also elicited attributions for assessed post-task outcomes. The findings revealed two complementary aspects of the task appraisal process, the first being situationally-induced self-efficacy and pleasure where learners self-evaluated their competence, the attractiveness of tasks, and regulated their eagerness to start particular tasks. The second, termed situationally-induced outcome expectancy, is where difficulty, probability of success, and utility of the task is judged. These findings suggest that positive appraisals based on self-efficacy and pleasure is perhaps the leading mechanism in learning intention formation in the classroom. However, negative appraisals of outcome expectations lead to low levels of situationally-induced self-efficacy and pleasure in the classroom.

2.3.3 The Cognitive-Motivational Process Model

The cognitive-motivational process model (Rheinberg, Vollmeyer, & Rollet, 2000; Vollmeyer & Rheinberg, 2000, 2006) represents yet another approach to describing motivation within the classroom learning process. The model describes the cognitive motivational process in terms of initial motivation, learning outcomes, and mediators between the two. Within the model, initial motivation includes four factors: probability of success, anxiety, interest and challenge. These factors represent expectancy, self-efficacy, interest and achievement motivational concepts. The degree to which these affect learning outcomes depends on mediators such as duration/frequency (how often or how long the task is done), systematic learning characteristics (degree to which learning is systematically or haphazardly done), the learning strategies employed, the motivational state of the learner (goal directedness), and their functional state (degree of engagement or flow within particular learning

tasks). The degree to which the various mediators affect initial motivation factors dictates the nature of both knowledge and transfer outcomes in the learning process. This model was validated through path analysis (structural equation modelling), in which the authors measured motivation with the Questionnaire on Current Motivation (Rheinburg, Vollmeyer, & Burns, 2001) and classroom flow with the Diagnosis of Motivation and Self-Concept (Rheinburg, Vollmeyer, & Engeser, 2003). The three models described above demonstrate the complex range of factors that contribute to learner motivation in the classroom, and have provided a theoretical basis from which the following L2 classroom motivational research has been conducted.

2.4 Motivation in the L2 Classroom

Motivation has been shown to manifest itself in individual learners differently across different academic subjects (Breen & Lindsay, 2002). Learning a language in an academic setting is a unique academic endeavour, and thus carries with it distinctive motivational implications (Gardner, 1985b; M. Williams 1994). More specifically, language is unique in that not only can it be a communicative coding system learned as an academic subject, but it is also a fundamental component of individual identity, and a conduit of social organization (Dornyei, 1994). One particularly unique aspect of language learning is that it requires the learner to take on a new foreign language identity, and the new language plays an important role in positioning the learner in immediate, and wider global, communities (Coetzee-VanRooy, 2006; Lamb, 2004, 2009; Yashima, 2002). This makes learning a language a fundamentally different proposition than other academic subjects such as history or biology. For second language learners the pursuit of an additional language may be essential for acculturating into a target language community, and may significantly affect an individual's potential access to education, services and employment. However, those who learn a new language as a foreign language, and primarily only encounter the target language within the classroom, have a fundamentally different set of concerns (H.D. Brown, 1994; Gass & Selinker, 1994; Oxford, 1996). The limited opportunities FL learners have to use the language in authentic situations means that what transpires in the classroom takes on particular importance. The primary importance of the classroom experience for such learners has resulted in specific attention being paid to the role particular classroom variables play in initiating and sustaining motivated learning. One variable to emerge from this inquiry is instructional materials. The position of

instructional materials in language learning motivational theory, and empirical research into their role in motivating language learners, are discussed below.

2.4.1 Instructional Materials in L2 Motivational Theory

The influence of classroom factors on motivation has long been a consideration in L2 motivational research. However, despite its longstanding presence, the perceived degree of importance of the classroom learning environment has changed dramatically over the history of research in this area. Understandably, early social psychological research primarily examined learners' perceived social distance from, and interest in interacting with, target language communities. Particularly in Gardner's (1985b) socio-educational model, the focus was primarily on the role of the integrative motive in contributing to language learning outcomes. This was an appropriate focus considering the number of findings indicating that this construct was a leading influence in contributing to language learning success (Gardner & Lambert, 1959, 1972). However, within this model the classroom environment, in Figure 2 represented as the *formal language acquisition context*, also plays an important mediating role between individual differences and learning outcomes. Within the model, language learning materials are represented in terms of their contribution to the development of attitudes toward the learning environment and in their role within formal language acquisition contexts. Students' attitudes toward the learning environment include attitudes formed as a result of experiences with instructional aspects of the classroom environment. Combined with the other elements comprising the integrative motive, these attitudes are seen "as the foundation for, or cause of, motivation to learn a foreign language" (Gardner, 1985, p. 153). Instructional materials are thus perceived to contribute to motivated learning behaviour within both formal and informal acquisition contexts. Formal acquisition contexts (i.e., contexts in which the primary objective is language instruction) are largely made up of teacher and class components. The influence of these components is not constant, but fluctuates depending on their specific characteristics, and how these in turn correspond to the specific characteristics of the individual learner. In this way, instructional materials are seen as appealing to individuals in varying ways depending on their intelligence, aptitude, motivation, situational anxiety, as well as the nature of the materials and how they are presented by the instructor.

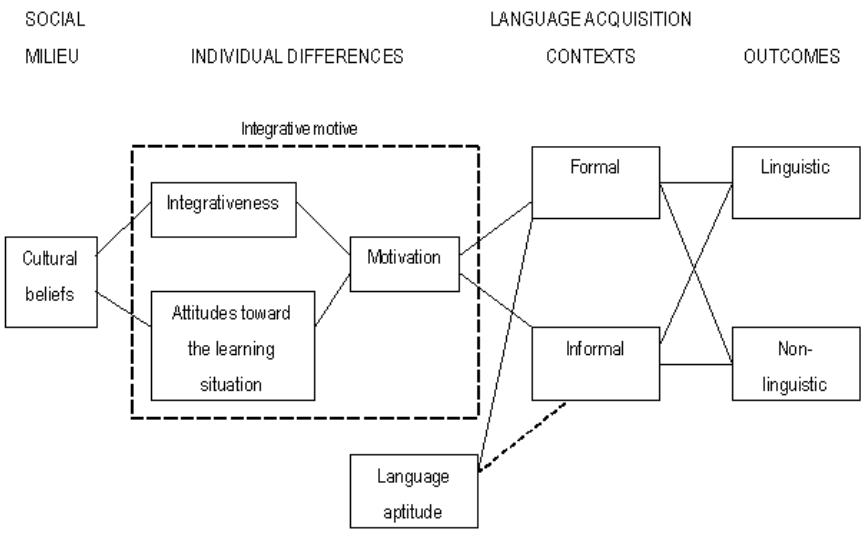

Figure 2. An operational formulation of the socio-educational model (Gardner, 1985, p. 153).

Despite the presence of a classroom component in Gardner's model, its perceived emphasis on external social factors inspired others to develop more classroom-centric approaches to motivation in language learning. One early example came from Skehan (1990), who formulated a classroom- and learner-based approach to examining individual differences in language learning. To illustrate the role of individual and classroom motivational variables in language learning, including instructional materials and teaching techniques, he developed a framework (Figure 3) which describes the various factors that influence motivation within the individual. These factors are classified into four distinct groups: factors outside the individual and within the language learning context (such as materials and teaching); factors originating outside the individual that are a result of learning (constraints and rewards); factors which originate inside the individual within the learning context (such as expectations and feelings of success); and factors formed within the individual which are the results of learning (goals). While instructional materials are represented here as a factor within the learning context outside the individual, the model also demonstrates their potential in contributing to surrounding motivational factors. Within the learning context instructional materials can also be seen as affecting learner expectations of the classroom experience, with engaging or relevant, or alternatively boring or irrelevant materials, either stimulating or reducing classroom expectations. Similarly, the relative

degree of difficulty and the content of particular materials can be seen as potentially contributing to learners' expectations for success and failure. Within factors stemming from learning results, instructional materials can be seen operating outside the individual in terms of their utility in overcoming constraints, and moving learners towards rewards they want to achieve. Within the learner, instructional materials can be seen operating similarly in terms of their perceived utility in assisting learners in achieving goals.

	Within the Learning Context	**The Results of Learning**
Outside the Individual	Materials Teaching	Constraints Rewards
Inside the Individual	Expectations Success	Goals

Figure 3. Factors contributing to motivation in language learning (Skehan, 1990).

In placing increasing attention on classroom motivation, cognition, and affect, Crookes and Schmidt (1991) served to demonstrate the importance of instructional materials to L2 learning motivation. Integrating the attention, relevance, confidence, and satisfaction components of Keller's (1987) ARCS model into their L2 motivational framework, they illustrate the varied roles instructional materials play in L2 learning. Their four level representation of L2 learning motivation demonstrates the different roles instructional materials can play in motivating learners. At the classroom level materials can be seen as playing an important role in promoting motivational techniques and activities, while at the syllabus level, they can be evaluated in terms of their ability to promote motivated engagement of class content. Dealing more with antecedent conditions which contribute to learner engagement, the micro level demonstrates where cognitive processing interacts with instructional materials as learners evaluate how congruent materials are with their goals, expectations, and the degree of confidence they engender.

Dörnyei's (1994) comprehensive classroom- and learner- focused motivational framework serves to further demonstrate the position and role of instructional materials in language learning motivation. The framework, integrating a wide range of psychological and social psychological constructs, describes major motivational components within a foreign language learning context. The three-tiered framework (Table 1) describes motivation on language, learner, and learning situation levels. Instructional materials are represented within the learner situation level, and like in Keller (1987) and Crookes and Schmidt (1990), are perceived to be influential in determining the degree of interest, relevance, satisfaction, and expectancy perceived by the learner. While affective and cognitive states within the learner level are considered to be fairly stable in this model, it is conceivable that the proficiency level of materials and the learning styles and strategies they embody and promote, would have an effect on these components of motivation, particularly in terms of perceived competence, causal attributions, and self-efficacy.

Table 1

Dörnyei's (1994) components of foreign language learning

Language level		Integrative Motivational Subsystem Instrumental Motivational Subsystem
Learner level		Need for achievement Self-confidence * Language use Anxiety * Perceived L2 Competence * Causal Attributions * Self-efficacy
Learning situation level		
	Course-specific motivational Components	Interest Relevance Expectancy Satisfaction
	Teacher-Specific motivational Components	Affiliative Drive Authority Type Direct Socialization of Motivation * Modelling * Task Presentation * Feedback
	Group-specific motivational Components	Goal-orientedness Norm & Reward System Group Cohesion Classroom Goal Structure

In an examination of motivation within the FL learning classroom, Julkunen (2001) provides an important perspective on the role of instructional materials in contributing to motivation and learning task engagement. Adapting Boekaerts (1988) motivational model to the FL learning context, Julkunen (2001) illustrates the specific roles of trait and state learner characteristics in contributing to situation-specific action tendencies and learning outcomes (Figure 4). Within the model, learner motivation is represented as a trait (TRAITS), and is seen as consisting of general motivational orientations and dispositional cognitive and affective characteristics such as degree of self-determination, attributional style, and trait anxiety. Traits, combined with appraisals of the learning situation, including students' perceptions of their competence and ability to carry out and complete tasks, contribute to state motivation (STATE-M), or the specific situational motivation revealed in the classroom.

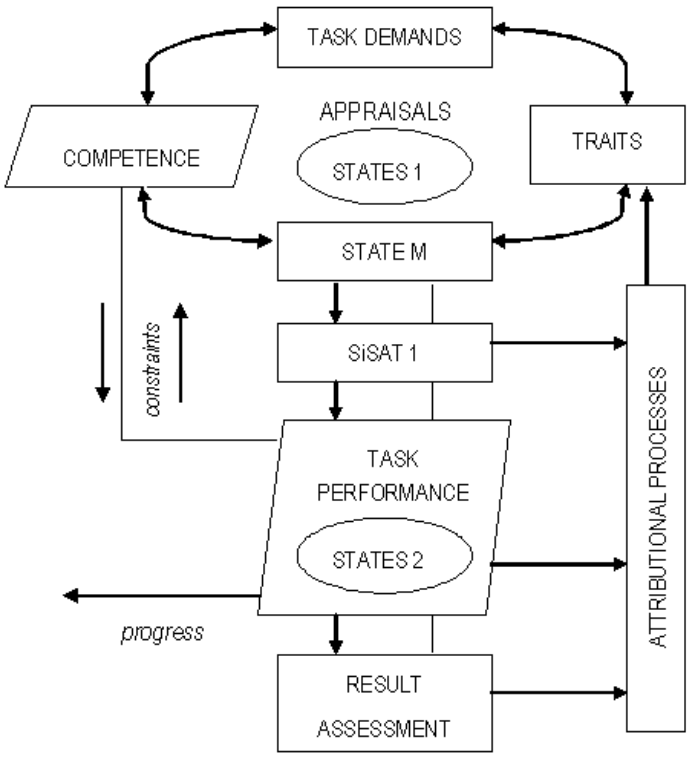

Figure 4. Julkunen's (2001) model of motivation in FL learning.

These factors combine to constitute the situation specific action tendency (SiSAT) of the learner, or their readiness to dedicate time, effort, and competence to

particular tasks (Julkunen, 2001). The ongoing results of task engagement, in terms of perceived progress as well as formal learning outcomes, feedback into learner trait and state motivation as learners make attributions and assess their ability to succeed in the learning process. Within the L2 learning classroom, instructional materials can be seen as contributing to motivation throughout the task completion process, particularly in terms of their roles in presenting and communicating task demands and how their relative level of difficulty contributes to competence appraisals. Combined, the above models and frameworks demonstrate the important role instructional materials play in motivating language learners. Importantly, they demonstrate the role of instructional materials in contributing to learners' state motivation in FL learning classrooms.

2.4.2 Empirical Studies Examining Instructional Materials and Motivation

Instructional materials have been shown to have a direct influence on learner motivation in a number of educational studies. This influence has been largely described in motivational and demotivational terms (Bahous, Bacha, & Nabhani, 2011; Christophel & Gorham, 1995; Gorham & Christophel, 1992; Gorham & Millette, 1997; Meshkat & Hassani, 2012; Williams, Burden, & Al-Baharna, 2001), where instructional materials are seen to either facilitate or inhibit motivation in learners. For teachers, selecting materials that truly motivate learners is difficult. Many teachers, due to time constraints and limited resources, are forced to use their intuition in predicting what materials work with particular populations of learners (Spratt, 1999). One problem with this is that teachers often misinterpret learner preferences (Spratt, 1999). Added to this difficulty is the fact that teachers tend to have their own evaluation styles and preferences, and may have very different interpretations of what materials appeal to learners (Johnson et al., 2008). Adding to this complexity is individual and class-composition variation, particularly in terms of the various learning styles, and personal and cultural backgrounds, that play a role in how students perceive materials (Wallace, 1997). These various challenges have encouraged empirical inquiry into the specific impact of materials on language learning motivation in specific contexts.

Research into the motivational influence of instructional materials has focused mainly on how their specific characteristics either motivate, or demotivate, learners. In an investigation of factors contributing to unsuccessful language learning in Hungary, Nikolov (2001) examined the role of instructional materials on learning outcomes. Students indicated that they liked specific aspects of particular materials, including

layout features (color, pictures, and illustrations) and qualitative aspects of texts, while disliking "boring" materials focusing on grammar or text memorization. While language learning materials did not emerge as one of the top predictors of language learning success, it was revealed that the manner in which instructors used materials was important. Ushioda (1996, 2001) revealed further details on the role instructional materials play in motivating language learners in her longitudinal qualitative study of French learners in Ireland. She demonstrated that learning materials represented one motivational feature within "external pressures/incentives" factors (which also included other factors such as course content stimulation, grades, learning atmosphere, attaining a good degree, parental influences, etc.). Over an eighteen-month period, learners demonstrated motivational differentiation dependent on the perceived satisfaction, or dissatisfaction, with course materials. Overall, factors perceived as external to the learner played a predominantly negative role in motivation, including L2 coursework/methods, tasks which exceeded lexical knowledge, and the gap between coursework studied and exam questions.

Examining materials and motivation from a different perspective, Matsumoto's (2007) qualitative examination of Japanese as a FL learners in an American tertiary setting found instructional materials to be an important contributor to peak learning experiences. Peak learning experiences (Bloom, 1982), derived from Maslow's (1959, 1970) concept of Peak Experiences, represent a state of high affective and cognitive fulfilment or satisfaction with the learning experience. Matsumoto's findings revealed that authentic materials such as comics, magazines, and newspapers, as well as popular media and materials pertaining to Japanese history, contributed to this state. However, it was also revealed that materials could be a negative learning factor when perceived to be uninteresting to learners.

The motivational effect of particular genres of instructional materials on language learners has also been observed in a small number of studies. One particular area which has received attention is the specific attributes of authentic versus non-authentic instructional materials (Gilmore, 2004, 2007; Guariento & Morley, 2001; Richards, 2006). In an examination of South Korean tertiary EFL learners, Peacock (1997) observed that, while learners reported that they found authentic material to be less interesting than artificial materials, their observed on-task engagement and motivated behaviour were significantly higher with authentic materials. Other instructional material types that have been empirically compared include paper-based versus web-based materials. Jarvis and Szymczyk's (2009) mixed-method examination

compared the effects of web- and book-based grammar learning materials on the motivation of ESL students from a number of countries learning in a tertiary EAP program in the UK. The study specifically examined which type of material was preferred in the self-study of grammar. The sample consisted of highly extrinsically/instrumentally motivated learners aiming at gaining entrance into regular university courses and who were thus highly aware of the importance of grammar study and practice. While the students initially found the web-based materials attractive and interesting, they preferred book-based materials for their availability, clear organization, comprehensibility of presentation, detailed explanations of grammar points, systematic nature, and portability. They found the lack of organization and the distracting nature of website links to be particularly demotivating in autonomous grammar learning. In another study presenting somewhat conflicting results, Henry (2007) found that ESP tertiary learners in Brunei embraced corpus-driven online materials. In particular, learners' found that access to the discourse structures and lexico-grammatical features enabled them to access language data they perceived necessary for fulfilling their language learning goals.

These studies demonstrate that the content of instruction, particularly as it is conveyed through instructional materials, influences learner motivation in a variety of ways. However, the limited number and scope of these studies suggest that further research needs to be done to clarify the motivational effects of instructional materials on language learners across a broader spectrum of learning contexts.

2.5 Language Learning Motivation Research in the Japanese Context

2.5.1 Motivational Characteristics of Japanese Learners

Research examining language learning motivation in Japanese learners has been reflective of the broader trends described above. A number of studies have examined motivation from a social psychological perspective, revealing a variety of general motivational orientations in Japanese language learners. In terms of integrative and instrumental orientations, the latter have generally been found to be more prevalent (Kimura, Nakata, & Okumura, 2001; Matsuda, 2004), but this has been somewhat dependent upon educational milieu (Kimura, Nakata, & Okumura, 2001). One likely reason for a stronger instrumental orientation, as LoCastro (2001) observed in her examination of attitudes, learner subjectivity, and L2 pragmatic norms in Japanese

tertiary English learners, is this segment of learners' preference for retaining their own identities rather than acculturating into English-speaking culture and communication norms. This preference, combined with a lack of opportunity to use English in authentic contexts, appears to result in a more developed instrumental orientation. Despite this instrumental bias, several Japan-based studies have revealed other orientations. Berwick and Ross (1989) demonstrated that motivation can evolve beyond the strictly instrumental over the course of the first year of tertiary studies, particularly as learners develop interests in other countries and travel. Additionally, Benson's (1991) examination of university freshmen found integrative reasons to study English stronger than instrumental motives. Although learners in this sample did appear to appreciate several utilitarian modern functions of English, they found that the overall utility of the language did not extend to domestic or local purposes. In a further study examining attitudes and motivational change over the first year of Japanese tertiary studies, O'Donnell (2003) revealed a sample of learners that exhibited neither instrumental nor integrative orientations. Together, these findings paint a somewhat contradictory picture of integrative and instrumental motivational orientations in Japanese learners.

Expanding upon the methods and theory developed within the traditional social psychological approach, language learning motivation research in Japan has examined an increasingly wider range of motivational orientations and variables within learners. Yashima (2002) revealed a new motivational orientation in Japanese learners with a study examining the relationship between FL learning motivation and learners' willingness to communicate (WTC). Drawing upon survey data, she revealed through path analysis that *international posture* influenced motivation in Japanese English learners, which was in turn shown to influence proficiency. Motivation was also demonstrated to be affected by self-confidence, which also positively influenced WTC. Similarly, Hashimoto's (2002) expanded social psychological approach demonstrated the importance of affective and cognitive variables in Japanese learners' motivation. Using the mini-AMTB to assess affective variables as predictors of reported L2 use and WTC, path analysis revealed that self-perceived competence led to increased L2 use and that L2 anxiety negatively influenced perceived competence. A strong path from WTC to motivation was demonstrated, as was a strong connection between perceived competence and motivation. Yamashiro and McLaughlin (2001) used both the AMTB and the FCLAS (Horwitz, Horwitz, & Cope, 1986) to examine the relationships between attitudes, motivation, anxiety and proficiency in low proficiency Japanese learners. Using path analysis, the study demonstrated possible causal connections between attitudes and motivation, anxiety and motivation, and motivation and

proficiency. Similarly, Brown, Robson, and Rosenkjar (2001) combined the thirteen subscales of the AMTB with five other data collection instruments in examining personality, motivation, anxiety, strategies, and language proficiency in Japanese EFL learners, and Mori and Gobel (2006) combined expectancy-value and socio-educational approaches to define motivation in a sample of non-English majors across gender. In a more recent study, Munezane (2013) investigated Japanese tertiary learners' WTC using a path model based on Gardner's socioeducational model and Dörnyei's (2005) Motivational Self System. These studies demonstrate an increasing tendency towards the integration of a wider range of cognitive and affective variables with traditional social psychological approaches in order to better describe motivation at the learner and classroom level in the Japanese FL learning context.

As language learning motivational research in Japan has expanded its scope to include cognitive variables, self-determination theory has been integrated into a growing number of studies. Most commonly, intrinsic and extrinsic motivational orientations are integrated into broader multidimentional studies where these orientations are examined in terms of how they relate to other motivational factors such as anxiety, gender and proficiency. A number of such studies (e.g., DaSilva, McInerney, McInerney, & Dowson, 2004; Hamada & Kito, 2007; Ockert, 2011; Tachibana, Matsukawa, & Zhong, 1996) have indicated a stronger extrinsic orientation in Japanese learners. Kimura et al. (2002) expand on these findings by demonstrating that these orientations can fluctuate across academic level and, in regard to tertiary learners, across majors. Specifically, they found higher intrinsic motivation in junior college students, English majors, and foreign language majors, whereas junior high school and engineering majors exhibited higher extrinsic motivation. In a study examining the connection between motivation and learner characteristics, Takahashi (2003) revealed intrinsic motivation to be closely related to pragmatic awareness. In a more comprehensive study examining the interplay between classroom anxiety, intrinsic motivation, and gender in Japanese tertiary EFL learners, Yashima et al. (2009) further revealed how intrinsic and extrinsic motivation operate on a variety of levels in a single population of learners. Overall, they found Japanese learners to be more extrinsically oriented with learners strongly endorsing identified regulation and generally endorsing more self-regulated types of learning. Amotivation was observed to be least endorsed in the sample. However, classes that were perceived to be too demanding or difficult caused students to feel lost, helpless, or confused leading to feelings similar to amotivation. They additionally observed a positive connection between learner comfort with native speaker interaction and intrinsic motivation.

A further cognitive factor which has been shown to play an important role in language learning motivation in Japanese learners is self-efficacy. Japanese learners have been observed to exhibit low self-evaluations of their overall English proficiency level and their ability to learn and use the language (Burden, 2002; DaSilva, McInerney, McInerney, & Dowson, 2004; Ebata, 2008; Kobayashi & Brown, 2003; O'Donnell, 2003; Woodrow, 2006). Tsuchiya's (2006) examination of demotivating factors in English learners revealed that the loss of English learning confidence is the most significant demotivator in Japanese university students, leading other factors such as class content, the compulsory nature of English study, uncertainty in how to learn, teachers, and negative group attitudes. This lack of self-efficacy has been observed as a leading EFL learning demotivator across academic milieu by Japanese teachers as well (Abe, Shimizu, Okuda, Ishizuka, & Ueda, 2010). One reason cited for this lack of confidence is students' limited exposure to English, and thus limited opportunity to practice and gain fluency in the language (Benson, 1991; Matsuda & Gobel, 2004). A further cited reason is the difficulty of grammar-based materials and the test-oriented nature of the English curriculum, which leaves students little opportunity to achieve success and experience positive self-efficacy (Burden, 2002; Falout, 2004; Kikuchi & Sakai, 2009; Tsuchiya, 2006).

Goal-setting and goal-orientation have also been determined to play an important role in the motivational orientations of Japanese EFL learners. Several studies have indicated that a lack of clear language learning goals negatively affects motivation in Japanese learners (Abe, Shimizu, Okuda, Ishizuka, & Ueda, 2010; Berwick & Ross, 1989; O'Donnell, 2003). Ockert (2011) observed that Japanese learners who have goals tend to have goals that are more utilitarian in nature, that are extrinsically or instrumentally connected to academic achievement or professional utility, rather than intrinsic goals. In a comprehensive examination of goals from Maehr's (1984) multiple goal model of personal investment, DaSilva, McInerney, McInerney and Dowson (2004) examined task, ego, social solidarity and extrinsic reward goals in Japanese tertiary students. The results revealed that Japanese learners' social goals conflict with academic studies. They also revealed, like the studies above, that Japanese students were particularly motivated by extrinsic rewards, but also that a strongly intrinsically motivated minority was also present. More advanced students were also seen to be driven by competition goals, particularly as they related to performance against others in standardized tests such as the TOEFL. Japanese students have also been observed to respond positively to particular classroom interventions in terms of language learning goal formation and development. Hayes (2008) found that involving Japanese students

in curricular development through ongoing lesson feedback over the course of a year of instruction resulted in learners feeling more self-reflective about learning, and more proactive in goal-setting.

A further direction of recent EFL motivational research in Japanese learners has involved its relationship with learner anxiety. A study by Andrade and Williams (2009) revealed that 75% of the Japanese tertiary EFL learners in their sample claimed to be affected by anxiety, of these 11% experienced anxiety at debilitative levels. In early learners, this anxiety has been posited to arise due to the novelty of engaging in English as a new academic subject (Takada, 2003), and in older learners due to their lack of self-efficacy in learning the language (Hashimoto, 2002). Anxiety has been shown to influence Japanese learners' motivation in a number of ways. It has been variously demonstrated to directly influence motivation, and in turn proficiency, (Yamashiro & McLaughlin, 2001), while also having a direct connection to pragmalinguistic awareness (Matsuda & Gobel, 2004), and the levels of intrinsic, extrinsic and instrumental motivation in learners (Carreira, 2006; Matsuda & Gobel, 2004; Yashima et al., 2009). In a longitudinal examination of motivation and anxiety, Koga's (2010) semester-long examination of motivation in Japanese university students revealed that learners' anxiety and sense of cooperativeness changed significantly over the course of a semester. The study revealed a dynamic relationship between anxiety and motivation, with decreasing levels of communication apprehension resulting in increased motivation, particularly in learners with low motivation and high anxiety. These changes in anxiety, and their resultant positive impact on motivation, were seen to develop in classrooms where a general sense of cooperativeness, and cooperative work activities, were promoted.

2.5.2 Instructional Materials and Motivation in the Japanese Context

There has been little explicit research into the effects of instructional materials on Japanese foreign language learners. Most insights into materials and motivation in this context have been revealed in the results of broader comprehensive studies. Such studies (e.g., Arai, 2004; Falout & Maruyama, 2004; Falout, Elwood & Hood, 2009; Hamada & Kito, 2008; Ikeno, 2002; Kojima, 2004; Tsuchiya 2004, 2006) have demonstrated the role of instructional materials in contributing to demotivation in learners, with students particularly citing inappropriate or uninteresting materials as being a negative influence. In an analysis of demotivators in the EFL classroom, Sakai

and Kikuchi (2009) identified instructional materials and the content of lessons as significant demotivating factors for Japanese high school students. In a study focusing explicitly on instructional materials in the Japanese university context, Davies (2006) revealed that students perceived teacher-generated materials and general textbooks differently, with a distinct preference for the former. General textbooks were seen as less inspirational, and the topics and activities were perceived to meet neither expectations nor specific needs. Davies' findings stressed learners' preference for personalization in the content of instructional materials, and how this contributes to learner interest, involvement, and investment. The study also demonstrated the importance of class-specific instruments, in this case questionnaires, in order to examine the characteristics of particular samples. In another explicit examination of instructional materials in Japan, Stott (2004) examined student reactions to English reading materials. The findings revealed that students recalled reading content better with new materials than with content they previously encountered in their L1. These results illustrated the importance of new content for stimulating interest in learners, as well as questioned the importance of L1 cultural content in FL learning materials. Japanese EFL learners' reactions to authentic materials have also been examined at the tertiary level. Hart (2002) traced students' ongoing impressions of authentic science materials through learner diaries revealing that perceived learner control over content, in addition to related goals and processes, enhanced perceptions of the learning experience.

2.6 Theoretical Framework

Drawing on the studies and theories discussed above, a theoretical framework is presented (Figure 5) which specifically situates learner motivation within the EFL learning context. While motivational frameworks have been presented in a number of ways in different studies (see Dörnyei, 1997, 2001, for summaries), the framework presented here is somewhat different in that it is a schematic representation of the learner's state motivation and the various factors and variables that potentially influence that state within the EFL classroom. There is a hierarchical element in its construction as the more immediate factors represent areas that have generally been shown to have the strongest and most immediate effects on foreign language learners' classroom motivation. However, the use of broken lines is meant to demonstrate that barriers between these influences are in fact diffuse, that they can both cross lines and may influences specific learners to differing degrees. In this respect, the framework strives to

reflect findings from both general and classroom-based language learning motivational theory and research, but also be flexible enough to allow for, and represent, individual variability where it arises.

With these parameters in mind, this framework will be described beginning at its core which represents the learner's *motivational state* in a FLL classroom. Working from the definition provided above, that is language learning motivation as sustained, goal-directed language learning behaviour, learners exhibiting sustained engaged efforts towards learning the TL in the classroom would be considered motivated language learners. Immediately tied up with the *motivational state* are *internal factors* that are affective and cognitive in nature, such as the individual's level of anxiety and self-efficacy (Dörnyei, 1994; Ehrman, 1996; Horwitz, 2001; Horwitz, Horwitz & Cope, 1986; MacIntyre & Gardner, 1991; Tremblay & Gardner, 1995). As demonstrated in the literature reviewed above, these areas are of increasing importance in L2 motivation research, and have been shown to have a particularly important influence on the learner's degree of engagement in the FL learning classroom. The *motivational state* and *internal factors* are presented within square boarders, and combined represent the *inner state* of the learner. This core is analogous to the learner level component of Dörnyei's (1994) framework for FL learning.

Moving outwardly, and represented by circular boarders, are external influences. These influences are also tied directly back to the inner state, but are not necessarily as immediate. For the EFL learner, the *learning environment*, which includes factors such as instructional materials and classroom content, as well as the teacher, are learners' most immediate external influences which can influence the *inner state*. For example, a particular teacher's approach, or particular instructional materials or class content, can either raise or lower anxiety levels or confidence in a particular learner (Chambers, 1993; Gorham & Christophel, 1992; Sakai & Kikuchi, 2009; Warrington & Jeffery, 2005). These in turn, looking back towards the core, can influence a student's motivational state in the EFL classroom. These processes are reflective of Julkunen's (2001) classroom-situated model of FL learning, where outcomes of tasks in the classroom influence state motivation in FL learners.

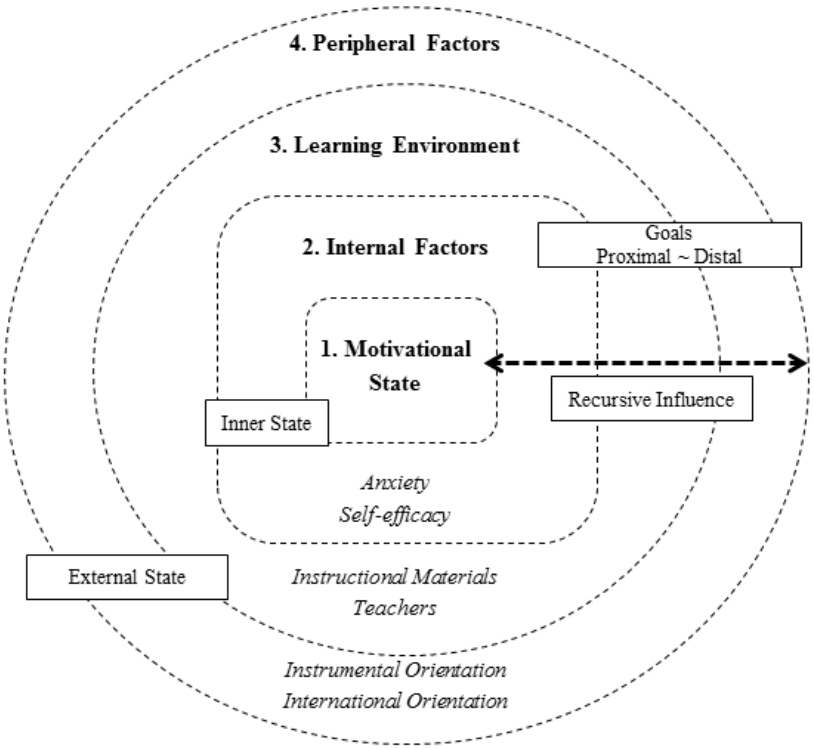

Figure 5. A theoretical framework for motivation in EFL learning.

Moving further outward, the next group of factors are termed *peripheral factors* due to their relative proximity from the classroom. These include variables such as the individual's degree of instrumental orientation; that is the degree which they, for example, want to use English for their future careers or other utilitarian purposes. Learners' international orientation is also represented at this level. This describes the degree to which the individual wants to interact with the wider international community, either through travel or media, or interacting with foreigners. Motivation, in terms of an individual identifying with the wider international, or global, community is a relatively recent area in motivational research and has been tied to self-identity research in the context of globalization (Lamb, 2004, 2009; Yashima, 2009).

Within the realm of external influences are goals which span from proximal (short-term classroom goals, such as completing a task or assignment, or passing a test) to distal (long-term goals such as using English in future careers or travel) (Ames, 1992; Ushioda, 1996, 2006). Goals, and the other external influences, can all potentially influence the *inner state*. As the dual-direction broken arrow indicates, these influences are recursive in nature, and can affect individual learners to varying degrees and in different ways (Ames, 1992; Pintrich, 2000a, 2000b).

This study's primary goal of discerning the influence of different genres of instructional materials on learner motivation in the classroom has been the central consideration in the development and construction of this theoretical framework. As the framework outlines, the motivational state of learners is a product of both the immediate situation-specific factors within the EFL classroom, as well as more peripheral external influences that can also direct learners' behaviour and attitudes towards EFL learning. The multiplicity of factors presented above, as well as the potential for individual fluctuation and variation (Dörnyei, 2000; Dörnyei & Otto, 1998; Koga, 2010; Ushioda, 1996, 2000), present a challenge for researchers seeking to measure motivation in learners. However, by conceptualizing the factors within the framework presented above, this study can proceed with a situated-conception of motivation in the EFL classroom from which it can more effectively assess the role instructional materials play in motivating learners.

2.7 Summary

The development of language learning motivational research has been characterised by a steady shift in emphasis from social psychological perspectives to cognitive and affective factors influencing the individual learner within the specific contexts in which learning takes place. This emphasis has resulted in a greater appreciation for the motivational influence of the various components of classroom instruction, and how these features stimulate interest, engender confidence, support or stimulate goals, meet expectancies, and fulfil perceived needs of learners. One area which has received a great deal of passing attention, but limited explicit investigation, is instructional materials. In a number of comprehensive studies, instructional materials have been shown to have a clear motivational effect on language learning, having been shown to either positively or negatively impact classroom engagement in learners. Explicit investigations into the motivational impact of instructional materials have shown that learners' motivational orientations can be affected by the content, difficulty and visual characteristics of instructional materials, and that particular genres or types of materials produce varying motivational responses in learners.

Japanese EFL learners have been demonstrated to exhibit a wide range of motivational characteristics, with findings varying according to the various academic milieus in which research has taken place in the country. Japanese tertiary learners have been observed to be more extrinsically and instrumentally oriented overall, owing largely to the foreign language context in which students find themselves studying for

more academic or utilitarian purposes. The importance of the classroom context is particularly apparent for such learners, as it represents their primary interaction with the target language. Instructional materials represent one of a number of motivational factors associated with the classroom learning environment. Several studies have revealed that Japanese EFL learners' motivation can be influenced by the instructional materials they encounter in the classroom. However, the limited amount of research in this area suggests that further explicit inquiry is required to better understand the true connection between instructional materials and EFL learning motivation in specific populations of Japanese learners. It is the goal of this study to address the dearth of research in this area, and in doing so, better describe the relationship between instructional materials and EFL learning motivation in Japanese engineering students.

Chapter 3

Research Methods

3. 1 Research Approach

The progressive development of L2 motivational research has been characterized by a gradual shift from the positivist methodologies which dominated early research approaches, particularly those examining motivation from a social-psychological perspective, to broader approaches employing a more extensive range of interpretative and mixed-methods approaches (Barker, 2005; Dörnyei, 2001; Hotho & Reimann, 1998; Spolsky, 2000). This shift is reflective of methodological approaches in educational research, where in order to adequately account for the vast number of ongoing internal and external factors contributing to complex and dynamic learning processes researchers have drawn increasingly on multiple and mixed-paradigm approaches (Chatteri, 2005; Ericikan & Roth, 2006; Johnson, & Onwuegbuzie, 2004; Johnson, Onwuegbuzie, & Turner, 2007). The complexity inherent in educational research, and particularly in foreign language education, has informed the selection of a mixed-method approach for this study. More specifically, this study is conducted from a dialectical position (Greene & Caracelli, 1997), where data collection instruments are chosen not according to particular paradigm predispositions, but according to their relative utility in acquiring specific types of data which provide varying, but equally important, perspectives (Johnson, 2009; Kratz, 1995; Salomon, 1991). This is theoretically similar to Walker and Evers' (1988) unity thesis, which asserts that the fundamental epistemological unity of educational research provides a touchstone which permits seemingly incommensurable paradigms to work together in a complementary fashion. The use of multiple methods represents an opportunity to view the subject through different lenses permitting findings to either converge in validation, or diverge to reveal other, perhaps deeper, meanings (Greene, Kreider, & Mayer, 2005). In addition to permitting triangulation of data, mixed-methods research also enables the researcher to minimize bias, develop more fully developed perspectives, be open to new perspectives and findings as they arise in the research process, and be more informed due to the diversity of values and perspectives they reveal (Greene & Caracelli, 1997; Greene, Kreider, & Mayer, 2005; Lewin, 2005; Piper & Simons, 2005). For these reasons, mixed-method approaches have been utilized in L2 learning research, where

they have been demonstrated to be complementary, and have generated broad insight into language learning (Bekleyen, 2009; Chang, 2010; Evans & Morrison, 2011; Jie & Xiaoqing, 2006; Lamb, 2004; Pan & Block, 2011; Peacock, 2010; Posen, 2006; Sabina, 2011; Sakui & Gaeis, 1999).

Due to the varied data produced in mixed-method studies, it is important to decide how the various components will be analyzed. One means of organizing a mixed-method research approach is to consider each component in term of "tracks", whether they be independent, parallel or crossover, and where and how each strand will intersect within the research process (Greene, Kreider, & Mayer, 2005; Li, Marquet, & Zercher, 2000). This particular study is organized around a combined parallel and crossover component design, where the results of each instrument are initially presented independently, and then subsequently compared in the discussion section. This permits the results of each instrument to be fully evaluated and presented within its distinct methodological paradigm, and then later cross-evaluated in terms of similarities and differences across findings.

3.2 Participants

The participants in this study were all tertiary Japanese engineering students learning EFL at a university in Japan. All were second year students enrolled in a mandatory English communication class. This particular class represents the seventh of eight English classes required as part of the liberal arts breadth requirements for their Bachelor of Engineering degree. The sample represents a convenience sample of students enrolled in the researcher's English communication classes, and consisted of a total of fifty-five (n=55) participants. This type of sample is common in second language research and is dictated by the availability of a potential pool of participants (Mackey & Gass, 2005). In this study the total sample is comprised of two class sections of students in mechanical engineering (n=29) and aerospace engineering (n=26). The sample is limited to this size (n=55) as this was the total number of participants who willingly enrolled in the class. The participants' overall English proficiency level ranged from high beginner to intermediate, although most had minimal communicative competence and could be considered false-beginners with relatively high passive grammar and reading skills, but underdeveloped communicative skills.

Engineering students in Japan, like other non-English majors in the country, are required to study English regardless of their degree of interest in the subject. Studies (e.g., Andrade & Williams, 2009; Tajima 2002) have shown that this situation contributes to subject-specific anxieties. Compared to students whose academic majors are associated with language learning (for example, English, language arts, international communication, business, etc.), Japanese non-English majors have been shown to have less confidence (Saito, 2007), lower intrinsic than instrumental orientations (Kimura, Nakata, & Okumura, 2001; Tsuchiya, 2006); a dislike for English (Tsuchiya, 2006), and lower overall proficiency (Saito 2007; Tsuchiya, 2006) with less proficient students being more easily demotivated, and once demotivated, being unable to self-regulate behaviors to overcome that state (Falout, Elwood, & Hood, 2009). Of Japan's undergraduate student population, 410,126, or 16.27%, major in engineering (MEXT, 2008). This is second most to social sciences, which accounts for 901,609, or 35.7% of the total as of 2008. Despite the significant number of engineering majors engaged in tertiary English education in Japan, and the EFL learning issues alluded to above, relatively few studies have examined their distinct characteristics as foreign language learners (exceptions include: Apple, Falout, & Hill, 2013; Johnson, 2012, 2013; Kimura, Nakata, & Okumura, 2004; Saito, 2007).

3.3 Instruments

3.3.1 Instructional Materials Motivational Survey (IMMS)

A questionnaire (summative rating scale) (Appendices 1 & 2) was used to assess how the two genres of instructional materials appealed to students across several cognitive areas considered important in learning motivation. The questionnaire was adapted from Keller's (1987, 2010) Instructional Materials Motivation Survey (IMMS), a 36-item instrument designed to measure the influence of instructional design on learner motivation in terms of four cognitive variables: confidence, attention, satisfaction, and relevance. The first scale, confidence (CON), is comprised of nine items measuring the degree to which materials promote self-efficacy in learners with a particular focus on the materials' perceived level of difficulty and comprehensibility. The second scale, attention (ATT), is made up of twelve items assessing the degree to which the materials initiate and sustain learners' attention through content and design features. The third scale, satisfaction (SAT), consists of six items measuring the degree to which the materials foster achievement motivation (feelings of accomplishment) and

intrinsic motivation (particularly interest and enjoyment) in learners. Finally, relevance (REL) is a nine-item scale measuring the degree to which learners perceive the materials to be of present or future value, or represent personal or professional utility value.

The IMMS has been shown to be effective in assessing the motivational impact of instructional materials in a wide range of educational situations, to have particular utility in comparing different types of instructional materials, and to be modifiable to address particular subjects. Some of the various contexts and applications the IMMS has been utilized for include: reading instruction (Klein, 1990), feedback and task selection (Corbalan, Kester, & Van Merrienloer, 2009), foreign language learning materials (Jakobsdottir & Hooper, 1995), and computer-based learning materials (Bollinger, Supanakoorn, & Boggs, 2010; Dempsey & Johnson, 1998; Pittenger & Doering, 2010; Rodgers & Winthrow-Thorton, 2005). A number of studies demonstrate the utility of the IMMS in comparing different types of instructional content. Examples include Choi and Johnson's (2005) comparison of video versus text-based instruction, Hwang and Kim's (2006) examination of the motivational effects of problem-based learning (PBL) versus traditional lecture-based learning, and Rockinson-Szapkiw, Holder, & Dunn's (2011) comparison of e-books and traditional books on motivation and learning outcomes. Rodgers and Winthrow-Thorton (2005) further demonstrated that several types of instructional content can be compared simultaneously with the IMMS. In a study comparing lecture, video, and interactive computer instruction, the authors demonstrated that the latter generated the highest levels of motivation in learners. A particular strength of the IMMS has been its modifiability for different learning situations, particularly where it has been modified to match the particular characteristics of individual learning contexts. One approach in this regard has been to modify individual items comprising the IMMS scales. Means, Jonassen, and Dwyer (1997) modified the IMMS by reducing the number of items to enable the scales to more accurately measure intrinsic relevance vs. embedded extrinsic relevance of ARCS-designed materials. Similarly, Hwang and Kim (2006) reduced the number of IMMS items within the four scales to compare problem-based learning with traditional lecture methods. On the other hand, Bollinger, Supanakoorn and Boggs (2010) added items to the IMMS to better evaluate the specific characteristics of podcasts as an instructional aid, increasing the overall total from 36 to 45 items. Another approach has been to use single scales from the IMMS to address particular aspects of instructional materials design, such as in Price's (1990) study which selectively used individual scales to assess affective and cognitive influences of printed instruction. In a study

evaluating the validity of the IMMS, Huang, Huang, Diefes-Dux and Imbrie (2006) concluded that valid use of the IMMS necessarily involves adjustment of items and/or scales to fit the characteristics of the particular subject matter of the instructional materials under investigation, as well as the characteristics of the segment of learners under examination.

A number of studies (e.g., Choi & Johnson, 2005; Jakobsdottir & Hooper, 1995; Pittenger & Doering, 2010) have supplemented the IMMS with additional open-ended items in order to garner additional qualitative insights into learners' impressions of instructional materials. The results of these studies demonstrated that open-ended items provided further depth and explanatory insights to IMMS data. While combining the IMMS with interviews and observations has yet to be done, the above results indicate that this particular approach holds significant potential, both in terms of the depth of data derived, and as a means for expanding methodological approaches for mixed-method IMMS studies.

3.3.1.1 IMMS pilot study

In order to ascertain the suitability of the IMMS for this study, a modified version of the instrument was piloted on a population of learners similar to the target segment. The items in the scales were adjusted slightly to reflect the structure and nature of the materials to be used in the study. A total of 32 Japanese engineering majors at a university in northern Japan participated in the pilot study. This sample represented a convenience sample of students enrolled in a general EFL communication class taught by the author. The IMMS was administered at the conclusion of a regular scheduled class session. Prior to administration, participants were informed about the nature of the questionnaire, particularly its purpose to collect student impressions of the instructional materials used in that particular day's class session. Thirty (n=30) complete questionnaires were collected; two questionnaires, one incomplete and one blank, were omitted from analysis. Results of the pilot administration of the IMMS are summarized in Table 2.

Table 2

Reliability of IMMS: Pilot Administration

	n of items	m	α
CON	9	3.35	.68
ATT	12	3.57	.88
REL	9	3.79	.85
SAT	6	3.76	.77
Whole Scale	36	3.60	.93

The overall Cronbach's alpha (α=.93) indicates very good internal reliability for the scale overall. Reliability for individual scales range from acceptable to very good. According to Dörnyei (2003), scales consisting of ten or more items should have an alpha of over .70. According to this standard, scales ATT (α=.88), REL (α=.85), and SAT (α=.77) have high internal reliability. The only scale falling below .70 is CON (α=.68). However, due to the fact that this scale has less than ten items its score can be considered acceptably reliable. Overall, the Cronbach's alpha results from individual scales, and the instrument as a whole, indicated that the IMMS could be administered in its revised form to evaluate confidence, attention, relevance, and satisfaction variables as they apply to language learning motivation and instructional materials in this population of learners. The final form of the scales and items of the IMMS used in this study are presented in Table 3.

Table 3

Adapted IMMS Scales and Items

Scale 1: Confidence

CON 1: When I looked at the materials, I had the impression that they would be easy for me.
CON 2: The materials were more difficult than I would like them to be.
CON 3: After doing the introductory activity, I felt confident that I knew what I was supposed to learn from the material.
CON 4: Many of the pages had so much information that it was hard to pick out and remember the important parts.
CON 5: As I worked on the materials, I was confident I could learn the content.
CON 6: The exercises in the materials were too difficult.
CON 7: After working on the materials for a while, I feel confident that I would be able to pass a test on their content
CON 8: I could not really understand quite a bit of the material.
CON 9: The good organization of the content helped me be confident that I would learn this material.

Scale 2: Attention

ATT 1: There was something interesting at the beginning of the materials that got my attention
ATT 2: The materials are eye-catching.
ATT 3: The quality of the writing helped hold my attention.
ATT 4: The materials are so abstract that it was hard to keep my attention on them.
ATT 5: The design of the materials looks dry and unappealing.
ATT 6: The way the information is arranged in the materials helped keep my attention.
ATT 7: The materials have things that stimulate my curiosity.
ATT 8: The amount of repetition in the EFL materials caused me to get bored sometimes.
ATT 9: I learned some things that were surprising or unexpected.
ATT 10: The variety of reading passages, exercises, illustrations, etc., helped keep my attention on the class materials.
ATT 11:The style of writing is boring.
ATT 12:There are so many words on each page that it is irritating.

Scale 3: Satisfaction

SAT 1:Completing the exercises in the EFL materials gave me a satisfying feeling of accomplishment.
SAT 2: I enjoyed the material so much that I would like to use similar materials again.
SAT 3: I really enjoyed studying the materials.
SAT 4:The wording of feedback after the exercises, or of other comments in the materials, helped me feel rewarded for my effort.
SAT 5: It felt good to successfully complete the materials.
SAT 6: It was a pleasure to work on such well-designed materials.

Scale 4: Relevance

REL 1:It is clear to me how the content of the materials is related to things I already know.
REL 2: There were examples that showed me how the material could be important to some people.
REL 3: Completing the materials successfully was important to me.
REL 4: The content of the materials is relevant to my interests.
REL 5:There are explanations or examples of how to use the knowledge in the materials.
REL 6:The content and style of writing in the materials convey the impression that its content is worth knowing.
REL 7: The materials were not relevant to my needs because I already knew most of it.
REL 8: I could relate the content of the materials to things I have seen, done or thought about my own life.
REL 9: The content of the materials will be useful to me.

3.3.1.2 IMMS data collection and analysis

The IMMS was administered in the fourteenth week of the study, following the completion of the twelve weekly ninety-minute lessons (Japanese and English versions of the IMMS are provided in Appendices 1 & 2; only the Japanese version was administered). Prior to distribution of the questionnaires, the students were provided informed consent forms, and were told that, despite participation in the study over the course of the semester, the completion of the questionnaire was purely voluntary, and that anyone not wanting to participate was free not to do so, and that there would be no penalty for non-participation. Participants were also informed that they would not have to write their names or any identifying information on the questionnaires, thus guaranteeing their anonymity. Informed consent forms were then collected, and thereafter questionnaires were distributed. Participants took between 15 to 20 minutes to complete the questionnaires, and a total of fifty-five (n=55) completed sets of IMMS forms were collected. One set included a complete IMMS for both EFL and ESP materials, and thumbnail images of the each set of materials for each genre to aid in recall of specific lessons and activities.

Data from the collected IMMS was input into Predictive Analytic Software (PASW) v.18 for analysis. Initially, general descriptive statistics were calculated to obtain an overall picture of how the scales and specific items were endorsed. During this exploratory stage of evaluating the data, histograms indicated the results were normally distributed. Thereafter, the comparative results of the two sets of materials were assessed. Inferential statistics (paired-samples *t*-test) were used to ascertain statistically significant differences between the two sets of materials, and to derive correlational relationships between the scales.

3.3.2 Post-class Questionnaire

In order to assess participants' impressions of instructional materials on a weekly class-by-class basis, a short post-class questionnaire was developed (Japanese and English versions are provided in Appendices 3 & 4; only the Japanese version was administered). The questionnaire consisted of short semantic differential scale items measuring students' impressions of the materials studied in each class session. The items consisted of fifteen pairs of adjectives with opposite meanings, such as satisfying/unsatisfying, important/unimportant, and meaningful/meaningless at the

opposite ends of a seven point scale. The value of each response ranged from -3 at the lower end of the scale for negative adjectives to +3 at the upper end for positive adjectives. The scale is based on similar instruments used by Peacock (1997) and Gardner (1985b) which were also used to examine the motivational influence of instructional content and the language learning classroom environment. This particular instrument was chosen for several reasons. First, as it was to be used weekly at the end of each class session, this particular design was chosen due to its utility in generating a wide range of data in a minimum amount of time. With its brief format it was hoped it would be minimally obtrusive to participants and the instructor, and would thus be positively completed at the end of each class session. Additionally, this format also provides the distinct benefit of permitting the recording of participant feedback immediately following instruction which allows for immediate impressions of the instructional materials to be recorded.

A total of 603 questionnaires were collected over twelve class sessions. When class sessions were fully attended 55 questionnaires were collected from the two classes, although absences and incomplete questionnaires (which were omitted) resulted in a lesser total in several classes. Data collected from the daily post-class questionnaire were input into PASW v.18 to ascertain descriptive statistics such as weekly means and standard deviations. Inferential statistics, in particular an analysis of variance (ANOVA), was then used to comparatively assess statistical significant differences between the weekly means of each item. Means plots for significantly different weekly results were then derived to illustrate fluctuations in attitudes toward the materials used.

3.3.3 Semi-structured Interviews

Semi-structured interviews were conducted in order to ascertain a wider range of data beyond the variables examined within the questionnaires. Interviews have been identified as a powerful qualitative tool for collecting thick descriptive data in language learners (Miura, 2011; Ushioda, 1996, 2001), and to be valuable in complimenting quantitative instruments such as questionnaires in mixed-method studies (Chang, 2010; Hamada & Kito, 2007; Peacock, 1997). A particular strength of the semi-structured format is its flexibility, as interviewers can digress and explore new topics as they arise (Nunan, 1997).

In conducting interviews two important issues generally guide their implementation: sufficiency and saturation (Seidman, 2006). Sufficiency is the question of whether or not the sample size reflects the range of participants in the target population and if it is sufficient enough to reflect the experiences of those within the sample. Saturation, the second issue, involves collection of the optimum amount of data before findings no longer reveal anything new. Seidman (2007) explains that these issues need to be considered in terms of the practical realities of resources (participants), and the nature of the research context and purpose. In this particular study, the limited sample size (n=55), its purpose (to add descriptive perspectives to the quantitative data collected), and its overall stance to have participation in all data collection activities to be strictly voluntary, dictated the manner in which this interview was undertaken.

The interviews were carried out at the end of the semester with a cohort of ten (n=10) learners from the overall sample of fifty-five (n=55) who completed the IMMS, representing 18% of the sample population. The participants were solicited by an open call for participation. Students who agreed to participate were provided with a drop-in interview schedule, allowing participants to take part in interviews at their convenience. Although eleven (n=11) students initially responded to the call for participation, only ten (n=10) actually showed up for interviews (brief demographic profiles of the ten participants are provided in Appendix 5). The interviews ranged between 12 and 25 minutes, and were focused primarily on six base questions (Table 4) from which the interviewer could expand and digress. All interviews were conducted in Japanese by the researcher, with a native-speaking Japanese assistant present to assist in the event of any communication issues.

Each interview was audio recorded, transcribed, and then translated from Japanese to English by a professional translator. Due to the recursive nature of qualitative analysis, the data corpus was initially rendered in English to facilitate the analysis process. It was not considered feasible to analyse the data in the original language (Japanese) as it would not have been practical to have a translator on hand for the lengthy process of classifying and reclassifying categories and themes; this constraint often dictates this approach to analysing translated qualitative data (Squires, 2008) . The content of each interview was subjected to content analysis following an adapted version of the protocol outlined by Neuendorf (2002). The first step involved preliminary consideration of the theory and rationale behind the study; in this case broadly considering the data as it pertained to the research questions. The second step involved preliminary conceptualizing of the variables which needed to be defined. Third,

the data was operationalized in terms of units of measurement. The fourth step involved first level coding of the data. First level coding initially involved structural coding of the data which involved framing the data corpus within research question categories (Saldana, 2009), and initial coding of interview scripts on a line-by-line basis, termed microanalysis by Strauss and Corbin (1998). Within this stage descriptive and *In Vivo* (words directly expressed by participants) codes were simultaneously recorded as initial codes. These steps provided a preliminary means of breaking down and examining the scope of the data present in the corpus. The fifth step involved second level coding. The purpose of this round of coding was to develop a "meta code" which would help prioritize, focus, and synthesize the data into more manageable units for analysis (Saldana, 2008). Within the second level coding reflective analytic note-writing was used as "both a code- and category-generating heuristic" (Saldana, 2008, p. 151). During this round two coders (the researcher and a tertiary TEFL instructor) coded the first round data independently in order to establish inter-coder reliability. The final stage involved tabulation and recording of results.

Table 4

Base Questions for Semi-structured Interviews

1. Are there any English learning materials or learning activities you have used in the past that you have liked? Can you give examples? Why did you like them?
2. Are there any English learning materials or learning activities you have used in the past that you have disliked? Can you give examples? Why did you dislike them?
3. In this class we used two different types of materials. Which did you prefer, and why?
4. Which genre of materials do you think is more valuable for you in the future?
5. Are there any particular lessons or activities in these materials that you liked? Why did you like it?
6. Are there any particularly lessons or activities in these materials that you disliked? Why did you dislike it?

3.3.4 Instructor Post-class Observation Notes

Instructor observations were also recorded in order to gain an additional perspective on students' interaction with the two different genres of instructional materials used over the course of the semester. Classroom-based studies provide teacher-researchers with a valuable opportunity to conduct participant observation (Mills, 2011). In order to effectively fulfil the dual teacher-researcher roles, it is important that the researcher try not to observe everything transpiring in the learning environment, but rather selectively observe manageable components of the class that are relevant to the research questions being examined (Mills, 2011). Within this study, the instructor specifically observed students' on- and off-task behaviours in terms of engagement in specific materials, activities, and learning tasks. These observations were recorded following each class session and compiled in form of field notes. To ensure accurate recall of observations in each class session, the field notes were recorded either immediately after each class session, or in the evening of the same day of each class. Observation notes were descriptive in nature, recording the instructor's objective recollections of students' interest, enthusiasm, engagement, concentration, and persistence with the specific activities and tasks presented in each class session's instructional materials. These observable classroom behaviours have been demonstrated to reflect overall class motivational levels in FL learning contexts (Peacock, 1997).

Coding of the instructor's post-class observation notes was conducted through a two-step process (as described in Saldana, 2008). First-round coding was conducted twice by the same rater, producing two preliminary lists of descriptive codes. The two lists were subsequently reviewed and merged. These descriptive codes were then grouped and organized into themes. This involved a recursive process of reducing and reorganizing the coded data until clear themes emerged. Due to the close relationships and interaction between observed themes and factors, a visual model was constructed to facilitate discussion of their specific characteristics within the broad scope of instructional materials and motivational engagement.

3.3.5 The Researcher's Role in Data Collection

Each of the data collection protocols was undertaken by the author who was acting in a dual researcher-instructor role. Dual-role research is commonplace in educational research (Anthony, 2004). It has been said that research is central to

teaching as it requires ongoing hypothesizing, testing and measuring as teachers evaluate both their students and their own practice (Mills & Spencer, 2011). However, when instructors conduct formal research in their professional practice a number of ethical and practical considerations need to be made. In the current study the primary issue the dual-role researcher had to address was that of power. Being in a position of power over students, instructors have an ethical responsibility not to exert undue influence over students to force participation in research. To mitigate any issues regarding the teacher-student power roles a number of steps were taken. First, prior to the study, potential participants were provided thorough explanations of the nature of the study that would be undertaken over the course of the semester, and were given the opportunity to register for the class, or alternatively, one of twelve other sections of the same class being offered simultaneously. Furthermore, students were explicitly told that they could decline participation in any of the data collection procedures over the semester, and were further provided a guarantee that participation would in no way affect their assessment. To ensure participants' anonymity, names were not written on, or otherwise associated with, any of the data collected. These steps placed the decision of participation clearly in the hands of the participants, and in doing so ensured that the power position of the instructor could not be used in a coercive manner. These steps also served to minimize the potential for the observer effect, or Hawthorne effect, as classroom behaviours or results were not associated with specific individuals.

3.4 Data Collection Procedures

The schedule for administrating the various instruments described above is summarized in Table 5. In the first week class participants were provided with an outline of the content of the class, and an explanation of the nature and purpose of the study. At this point, the nature of the brief weekly self-report questionnaires, and the end-of-semester IMMS, was explained to students. Students were then informed that participation in the study was purely voluntary. They were expressly told that that their participation, or non-participation, in the study would have no impact on grades. Additionally, they were told that even if they chose to take part, they were free to withdraw from participation at any time. A point was made to ensure that the students were aware that all instruments were to be completed in total anonymity, that none of the collected instruments required students to write their names or any identifying information. Students were then provided with informed consent forms, and asked to

consider whether or not they wanted to participate. Those choosing to do so were asked to return the form the following week.

In the second week informed consent forms were collected by those who chose to participate in the study. Between the second and thirteenth weeks, students were taught alternatively with the EFL and ESP materials, with instructional genres rotating each week. This procedure was utilized as a means to provide even exposure to the materials over the length of the semester in order to facilitate balanced recall for end-of-the-semester data collection protocols. During each class session the instructor observed students' reaction to, and engagement with, the instructional materials, and recorded these observations in the form of post-class field notes. Following each class session, participants took approximately five minutes to fill out the post-class materials assessment questionnaire.

Table 5

Research Schedule

Week	Instructional Materials	Research Instruments
1	Syllabus	Informed consent forms
2, 4, 6, 8, 10, 12	General EFL Material	1. Self-report Questionnaire 2. Instructor Observations
3,5,7,9,11,13	ESP Materials	1. Self-report Questionnaire 2. Instructor Observations
14	(n/a)	IMMS
15	(n/a)	Semi-structured Interviews

In the fourteenth week, the participants filled out the IMMS. A separate IMMS form was provided for each set of materials (EFL and ESP). The students were provided with thumbnail images of each page used over the course of the semester to facilitate recall, and were additionally told they could look back over the actual materials if they wanted to consult them to refresh their memories. The participants were solicited for interviews between the twelfth and fourteenth weeks of the semester, and semi-structured interviews were conducted in the fifteenth week.

3.5 **Instructional Materials**

Two distinct genres of instructional materials were selected for comparison in this study. One genre was general communicative EFL materials. These materials included listening and speaking activities based on general themes relevant to young adult English language learners, and are frequently used in English communication classes in Japanese universities. Although the communicative aspect of these materials would likely be novel to these particular learners, the general subject matter would be similar to topics they had been exposed to in prior studies, particularly in junior and senior high school. The second set of instructional materials, ESP materials, was chosen for several reasons. First, the subject matter of these materials aligns with the participants academic majors. Because of this, it was thought that these materials may be both instrumentally and intrinsically appealing to learners; instrumental in the sense that the language could be applied to their engineering research and future careers, and intrinsically as the subject matter potentially matched learners' interests. Both sets of materials were based on published EFL and ESP textbook materials graded within the high beginner ~ low intermediate proficiency band. More specifically, the EFL materials were adapted from Craven's (2011) *Breakthrough 2: Success with English* textbook, while the ESP materials were adapted from Bonamy's (2008) *Technical English 1*, and Hollett's (2003) *TechTalk*. A summary of the instructional aims and content of the materials used in each class is outlined in the class syllabus (Appendix 5).

Chapter 4

Results

4.1 IMMS Results

4.1.1 IMMS Descriptive Statistics

In order to ascertain a broad overview of the overall characteristics of the data derived from the two IMMS scales, descriptive statistics were generated for both scales and individual items. Table 6 presents descriptive data for each of the four IMMS scales of both questionnaires. The mean scores of individual scales ranged from m = 3.23 (CON) to m = 3.77 (REL & SAT) for the ESP scales, and from m = 3.20 (CON) to m = 3.75 (SAT) for the EFL materials, indicating an overall positive endorsement for both sets of materials. Both types of materials received highest endorsements for SAT and REL scales while CON was the lowest.

Table 6

IMMS Scale Results: Descriptive Statistics

	ESP Materials				EFL Materials			
	n	m	SD	α	n	m	SD	α
ATT	55	3.61	.848	.846	55	3.65	.859	.867
CON	55	3.23	.833	.694	55	3.20	.889	.677
REL	55	3.77	.807	.755	55	3.65	.789	.826
SAT	55	3.77	.830	.787	55	3.75	.804	.817
Combined	55	3.59	.411	.910	55	3.54	.434	.920

Table 7

IMMS Results: Descriptive Statistics for EFL Items

	n	m	SD	Range	Variance	Skewness	Kurtosis
SAT1	55	3.52	.85	3	.735	-.545	-.487
SAT2	55	3.43	.76	3	.584	-.166	-.339
SAT3	55	3.98	.75	3	.574	-.500	.228
SAT4	55	3.70	.97	4	.951	-.867	.783
SAT5	55	3.78	.65	3	.433	-.548	.811
SAT6	55	4.07	.81	3	.661	-.565	-.171
CON1	55	2.90	1.0	4	1.12	.187	-.965
CON2	55	2.60	.93	3	.874	.192	-.944
CON3	55	3.32	.77	3	.595	.107	-.283
CON4	55	3.18	1.0	4	1.00	-.151	-.647
CON5	55	3.34	.86	3	.749	-.391	-.979
CON6	55	3.34	.90	3	.823	-.291	-1.03
CON7	55	2.94	.98	4	.978	.351	-.409
CON8	55	3.56	.78	4	.621	-1.16	1.34
CON9	55	3.49	.69	3	.477	.384	-.109
ATT1	55	3.34	.86	3	.749	-.035	-.706
ATT2	55	3.72	.91	4	.832	-.637	.453
ATT3	55	3.58	.80	4	.655	-.819	1.08
ATT4	55	3.70	.83	4	.692	-.804	1.26
ATT5	55	3.92	.95	4	.921	-.764	.396
ATT6	55	3.32	.88	4	.780	-.370	-.258
ATT7	55	3.45	.76	4	.586	-.999	.914
ATT8	55	3.65	.88	3	.786	-.241	-.569
ATT9	55	3.49	.81	3	.662	-.719	-.450
ATT10	55	3.54	.91	4	.845	-.881	.806
ATT11	55	3.90	.79	3	.640	-.283	-.416
ATT12	55	3.94	.86	4	.756	-1.11	1.88
REL1	55	3.27	.78	3	.609	-.284	-.851
REL2	55	4.00	.69	3	.481	-.690	1.28
REL3	55	4.00	.81	3	.667	-.635	.179
REL4	55	3.29	.83	4	.692	-.800	.569
REL5	55	3.41	.89	4	.803	-.305	-.065
REL6	55	3.80	.64	3	.422	-.202	.208
REL7	55	3.81	.90	4	.818	-1.18	2.14
REL8	55	3.34	.84	3	.712	-.355	-.885
REL9	55	3.96	.69	3	.480	-.645	1.15

Descriptive results are also provided for individual items of the EFL and ESP questionnaires in Table 7 and Table 8 respectively. The results of the EFL questionnaire indicates that the four most endorsed items were from the Satisfaction and Relevance scales (SAT6 m = 4.07; REL2 m = 4.00; REL3 m = 4.00; and REL9 m = 3.96). As the above figures indicate, only three of the items had a mean of over four (m > 4). The four least-endorsed responses from the EFL questionnaire all came from the Confidence scale (CON2 m = 2.60; CON1 m = 2.90; CON7 m = 2.94; CON4 m = 2.18), with all four receiving endorsements of less than three (m < 3).

Table 8

IMMS Results: Descriptive Statistics for ESP Items

	n	m	SD	Range	Variance	Skewness	Kurtosis
SAT1	55	3.80	.80	3	.644	-.731	.454
SAT2	55	3.52	.85	3	.735	-.362	-.512
SAT3	55	3.81	.90	4	.818	-1.02	1.16
SAT4	55	3.74	.96	4	.934	-.992	1.06
SAT5	55	3.61	.73	3	.537	-.427	.068
SAT6	55	4.12	.72	3	.521	-.504	.130
CON1	55	2.89	.89	4	.803	.381	-.504
CON2	55	2.98	1.13	4	1.27	.037	-.1.08
CON3	55	3.38	.89	4	.796	-.847	.355
CON4	55	3.34	.79	3	.638	-.262	-.672
CON5	55	3.23	.71	2	.517	-.389	-.962
CON6	55	3.34	.79	3	.638	-.262	-.672
CON7	55	2.83	.97	4	.954	.341	-.276
CON8	55	3.70	.68	3	.469	-.629	.629
CON9	55	3.49	.60	3	.366	-.225	-.336
ATT1	55	3.60	.89	3	.800	-.393	-.532
ATT2	55	3.45	.91	4	.845	-.603	-.206
ATT3	55	3.60	.87	3	.763	-.145	-.580
ATT4	55	3.69	.85	4	.736	-.625	.812
ATT5	55	3.81	.74	3	.559	-.515	.390
ATT6	55	3.23	.71	2	.517	-.389	-.962
ATT7	55	3.47	.85	4	.735	-.918	.231
ATT8	55	3.52	.87	4	.772	-.765	.302
ATT9	55	3.41	.93	3	.877	-.385	-.993
ATT10	55	3.52	.87	4	.772	-.935	.325
ATT11	55	4.00	.83	3	.704	-.586	-.082
ATT12	55	4.01	.78	3	.611	-.757	.726
REL1	55	3.52	.93	4	.884	-.290	-.162
REL2	55	3.89	.80	3	.655	-.884	.827
REL3	55	4.05	.82	3	.682	-.513	-.345
REL4	55	3.58	.85	3	.729	.013	-.578
REL5	55	3.47	.89	4	.809	-.470	-.006
REL6	55	3.83	.71	3	.510	-.066	-.329
REL7	55	4.07	.89	4	.809	-1.41	3.21
REL8	55	3.58	.71	3	.507	-.140	-.100
REL9	55	4.01	.62	3	.389	-.488	1.40

Results of the ESP materials questionnaire indicated that the four most highly endorsed items came from Satisfaction, Relevance and Attention scales (SAT6 m = 4.12; REL7 m = 4.07; REL3 m = 4.05; REL9 m = 4.01; ATT 12 m = 4.01). With the addition of ATT 12 (m = 4.00), a total of six items were highly endorsed with a mean equal to or greater than four ($m \geq 4$). Like the EFL materials, the four least endorsed items were all within the Confidence scale (CON7 m = 2.87; CON1 m = 2.89; CON2 m = 2.98; CON5 m = 3.23).

4.1.2 IMMS Inferential Statistics

4.1.2.1 Paired-samples *t*-tests

A paired-samples t-test was conducted to evaluate differences in participants' responses to the two genres of materials as measured across IMMS scales (Table 9). A statistically significant difference was observed in only one of the four IMMS scales. Specifically, there was a significant difference between RELEFL (m = 3.65, SD = .51) and RELESP (m = 3.77, SD = .47), t = -2.43, df = 54, p <.018 (two-tailed). These findings indicate that the participants found the ESP materials to be more relevant to their needs than the EFL materials.

Table 9

Paired Samples t-test for IMMS Scales across Material Genres

	Paired Differences								
				95% Confidence		Interval of difference			
	Mean	SD	Error M	Lower	Upper	t	df	Sig. (2-tailed)	Cohen's d
Pair 1 ATTEFL-ATTESP	.036	.54	.073	-.111	.184	.493	54	.624	.047
Pair 2 CONEFL-CONESP	-.030	.41	.055	-.141	.080	-.546	54	.588	.035
Pair 3 RELEFL-RELESP	-.121	.37	.049	-.221	-.021	-2.436	54	.018*	.151
Pair 4 SATEFL-SATESP	-.019	.39	.052	-.125	.085	-.377	54	.707	.024

A paired-samples *t*-test was also conducted to evaluate differences in participants' responses to individual items of the IMMS (Table 10). Results indicated statistically significant differences across five items in three separate scales. Three of the items demonstrating significant differences came from the Relevance scale. Specifically, these differences occurred between: RELEFL1 (m = 3.26, SD = .78) and RELESP1 (m = 3.52, SD = .93), t = 2.08, df = 54 p > .042 (two-tailed); RELEFL7 (m = 3.81, SD = .90) and RELESP7 (m = 4.07. SD = .89), t = 2.60, df = 54, p > .012 (two-tailed); and RELEFL8 (m = 3.34, SD = .84) and RELESP8 (m = 3.58, SD = .71), t = 2.14, df = 54, p > .036 (two-tailed). These three items all show significant increases in the direction of the ESP materials, indicating higher perceived relevance for these three items. Single items from the Confidence and Satisfaction scales demonstrated a similar positive orientation toward the ESP materials with significant differences revealed between CONEFL2 (m = 2.60, SD = .93) and CONESP2 (m = 2.98, SD = 1.13), t =

2.20, *df* = 54, *p* > .032 (two-tailed) and between SATEFL1 (m = 3.52, SD = .85) and SATESP1 (m = 3.80, SD = .80), *t* = 2.59, *df* = 54, *p* > .012 (two-tailed).

Table 10

Paired Samples t-test: Individual Items

	Paired Differences							
			95% Confidence Interval of difference					
	m	SD	Lower	Upper	t	df	Sig. (2-tailed)	Cohen's *d*
Pair 1 CON1esp-CON1efl	-.018	1.20	-.345	.308	-.111	54	.912	.011
Pair 2 CON2esp-CON2efl	.381	1.28	.034	.728	2.20	54	.032*	.367
Pair 3 CON3esp-CON3efl	.054	.890	-.186	.295	.454	54	.652	.072
Pair 4 CON4esp-CON4efl	.163	.995	-.105	.432	1.21	54	.228	.177
Pair 5 CON5esp-CON5efl	-.109	.831	-.333	.115	-.973	54	.335	.139
Pair 6 CON6esp-CON6efl	.000	.838	-.226	.226	.000	54	1.00	.000
Pair 7 CON7esp-CON7efl	-.109	.533	-.253	.035	-1.51	54	.135	.112
Pair 8 CON8esp-CON8efl	.145	.890	-.095	.386	1.21	54	.231	.191
Pair 9 CON9esp-CON9efl	.000	.544	-.147	.147	.000	54	1.00	.000
Pair 10 ATT1esp-ATT1efl	.254	1.12	-.049	.558	1.67	54	.099	.297
Pair 11 ATT2esp-ATT2efl	-.272	1.20	-.599	.054	-1.67	54	.100	.296
Pair 12 ATT3esp-ATT3efl	.018	.892	-.223	.259	.151	54	.880	.023
Pair 13 ATT4esp-ATT4efl	-.018	1.04	-.300	.264	-.129	54	.898	.011
Pair 14 ATT5esp-ATT5efl	-.109	1.03	-.387	.169	-.785	54	.436	.129
Pair 15 ATT6esp-ATT6efl	-.090	.928	-.341	.160	-.726	54	.471	.112
Pair 16 ATT7esp-ATT7efl	.018	.971	-.244	.280	.139	54	.890	.024
Pair 17 ATT8esp-ATT8efl	-.127	.982	-.392	.138	-.961	54	.341	.148
Pair 18 ATT9esp-ATT9efl	-.072	.857	-.304	.159	-.629	54	.532	.091
Pair 19 ATT10esp-ATT10efl	-.018	.804	-.235	.199	-.168	54	.868	.022
Pair 20 ATT11esp-ATT11efl	.090	.844	-.137	.319	.798	54	.428	.123
Pair 21 ATT12esp-ATT12efl	.072	.572	-.082	.227	.942	54	.350	.085
Pair 22 REL1esp-REL1efl	.254	.907	.009	.499	2.08	54	.042*	.291
Pair 23 REL2esp-REL2efl	-.109	.685	-.294	.076	-1.18	54	.243	.147
Pair 24 REL3esp-REL3efl	.054	.590	-.105	.214	.685	54	.496	.061
Pair 25 REL4esp-REL4efl	.290	1.18	-.028	.610	1.82	54	.073	.345
Pair 26 REL5esp-REL5efl	.054	.678	-.128	.237	.596	54	.553	.067
Pair 27 REL6esp-REL6efl	.036	.744	-.164	.237	.362	54	.719	.044
Pair 28 REL7esp-REL7efl	.254	.725	.058	.450	2.60	54	.012*	.290
Pair 29 REL8esp-REL8efl	.236	.815	.015	.456	2.14	54	.036*	.308
Pair 30 REL9esp-REL9efl	.054	.558	-.096	.205	.724	54	.472	.076
Pair 31SAT1esp-SAT1efl	.272	.780	.061	.483	2.59	54	.012*	.339
Pair 32 SAT2esp-SAT2efl	.090	.776	-.118	.300	.868	54	.389	.111
Pair 33 SAT3esp-SAT3efl	-.163	.787	-.376	.049	-1.54	54	.129	.205
Pair 34 SAT4esp-SAT4efl	.036	.507	-.100	.173	.531	54	.598	.041
Pair 35 SAT5esp-SAT5efl	-.163	.631	-.334	.007	-1.92	54	.060	.245
Pair 36 SAT6esp-SAT6efl	.054	.779	-.156	.265	.519	54	.606	.065

4.1.2.2 Correlation coefficients

Correlational relationships between IMMS scales were investigated using Pearson product-moment correlation coefficient. Results indicated positive correlation between all scales for both genres of materials (see Tables 11 and 12). Within the scales assessing ESP materials, large correlations, that is those falling between r = .50 to 1.00 (Cohen, 1988), were observed between ATT and REL (r = .72; p < .00), ATT and SAT (r = .73; p = .00), and SAT and REL (r = .68; p < .00) indicating a strong relationship between these scales. Demonstrating medium strength relationships in range of r = .30 to .49 (Cohen, 1988) were the correlations between CON and ATT (r =.36; p = .00), REL (r = .39; p = .00), and SAT (r = .33; p < .01). While these correlations are somewhat weaker than the first three pairs, they still indicate moderately strong correlations.

Within the IMMS scales assessing EFL materials, large correlations were observed between ATT and REL (r = .65; p < .00), ATT and SAT (r = .78; p < .00), and REL and SAT (r = .72; p = .00) indicating a strong relationship between these scales. A medium correlation was observed between CON and ATT (r = .44; p < .00) and SAT and CON (r = .36; p < .00) indicating a lesser, but still significant correlational relationship between these scales. A small, as classified as ranging from r = .10 to .29 (Cohen, 1988), correlation was observed between REL and CON (r = .23; and p < .07), a relationship which can be classified as insignificant due to the p-value failing to fall below p < .05.

Table 11

EFL Materials: IMMS Scale Pearson Correlations

		ATT	CON	REL	SAT
ATT	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	55			
CON	Pearson Correlation	.440*	1		
	Sig. (2-tailed)	.001			
	N	55	55		
REL	Pearson Correlation	.656*	.239	1	
	Sig. (2-tailed)	.000	.079		
	N	55	55	55	
SAT	Pearson Correlation	.782*	.360*	.723*	1
	Sig. (2-tailed)	.000	.007	.000	
	N	55	55	55	55

*.Correlation is significant at the 0.01 level (2-tailed)

Table 12

ESP Materials: IMMS Scale Pearson Correlations

		ATT	CON	REL	SAT
ATT	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	55			
CON	Pearson Correlation	.365**	1		
	Sig. (2-tailed)	.006	55		
	N	55			
REL	Pearson Correlation	.726**	.396**	1	
	Sig. (2-tailed)	.000	.003		
	N	55	55	55	
SAT	Pearson Correlation	.738**	.332*	.684**	1
	Sig. (2-tailed)	.000	.013	.000	
	N	55	55	55	55

**.Correlation is significant at the 0.01 level (2-tailed)
*.Correlation is significant at the 0.05 level (2-tailed)

4.2 Post-Class Questionnaire Results

A weekly post-class questionnaire (Appendices 3 & 4) consisting of fifteen semantic differential scale items was administered to ascertain participants' ongoing responses to class materials on a session-by-session basis. A total of 603 (n = 603) questionnaires were collected over twelve class sessions. General descriptive results of these questionnaires are described in Table 13. The highest overall means all belonged to ESP items (necessary m=2.02; absorbing m=2.01; enjoyable m=2.00; meaningful m=2.00; valuable m=1.97). The lowest endorsed responses came from adjectives describing the relative difficulty of the materials (EFL m=.579; EFL m=.640) and the effort they required (EFL m=.670; ESP m=.803).

Table 13

Summary of Weekly Questionnaires: Descriptive Results

Adjective	genre	n	m	SD	Std Err	Min	Max
important	EFL materials	297	1.69	.924	.053	-2.00	3.00
	ESP materials	306	1.90	.978	.055	-3.00	3.00
satisfying	EFL materials	297	1.60	.984	.057	-1.00	3.00
	ESP materials	306	1.84	1.01	.057	-3.00	3.00
easy	EFL materials	297	.579	1.34	.078	-3.00	3.00
	ESP materials	306	.640	1.46	.083	-3.00	3.00
interesting	EFL materials	297	1.45	1.00	.058	-1.00	3.00
	ESP materials	306	1.62	1.06	.061	-2.00	3.00
rewarding	EFL materials	297	1.48	1.07	.062	-2.00	3.00
	ESP materials	306	1.67	1.02	.058	-1.00	3.00
effortless	EFL materials	297	.670	1.21	.070	-3.00	3.00
	ESP materials	306	.803	1.36	.078	-3.00	3.00
useful	EFL materials	297	1.70	.932	.054	-1.00	3.00
	ESP materials	306	1.95	.946	.054	-1.00	3.00
appealing	EFL materials	297	1.43	1.04	.060	-2.00	3.00
	ESP materials	306	1.56	1.02	.058	-1.00	3.00
necessary	EFL materials	297	1.72	.853	.049	-1.00	3.00
	ESP materials	306	2.02	.811	.046	-1.00	3.00
valuable	EFL materials	297	1.71	.984	.057	-1.00	3.00
	ESP materials	306	1.97	.931	.053	-1.00	3.00
good	EFL materials	297	1.79	.940	.054	-1.00	3.00
	ESP materials	306	1.96	.950	.054	-2.00	3.00
absorbing	EFL materials	297	1.83	1.02	.059	-2.00	3.00
	ESP materials	306	2.01	1.03	.059	-2.00	3.00
enjoyable	EFL materials	297	1.83	1.01	.059	-1.00	3.00
	ESP materials	306	2.00	1.04	.060	-2.00	3.00
meaningful	EFL materials	297	1.79	.949	.055	-1.00	3.00
	ESP materials	306	2.00	.914	.052	-1.00	3.00
agreeable	EFL materials	297	1.64	1.04	.060	-3.00	3.00
	ESP materials	306	1.87	1.00	.057	-1.00	3.00

In order to examine changes over the twelve weeks of instruction, and to measure the statistical significance of these fluctuations, a one-way between groups analysis of variance (ANOVA) was conducted and means plots calculated for each item. The ANOVA results (Table 14) indicated statistical differences in weekly results in four items. There were statistical differences observed at the $p < .05$ level in: "Easy" scores: F (11,591) = 1.94, p = .03; "Appealing" scores: F (11,591) = 2.00, p = .026; and "Valuable" scores: F (11,591) = 2.02, p = .025. Statistically significant difference at the $p < .01$ level was observed in "Necessary" scores: F (11,591) = 3.38, p = .00. Means plots for each of these four statistically significant items are presented below (Figures 7-10). The third item, "Easy" (Figure 6), showed week to week fluctuations in mean scores with both the average low score, occurring in week 2 (m = .16; SD = 1.36), and the highest average score of week 8 (m = 1.03; SD = 1.38), occurring in lessons employing ESP materials. The eighth item, "Appealing" (Figure 7), received steadily increasing endorsement from a low average in Week 1 (m = .98; SD = 1.17) to its highest average in Week 12 (m = 1.72; SD = .98); the average in week 8 (m = 1.69; SD = .98) represents an increase in interest approaching that of Week 12. These two high points came in classes instructed with ESP materials while the lowest endorsement in Week 1 came in classes taught with EFL materials. The means plot for item 9, "Necessary" (Figure 8), shows rising and falling fluctuations over the course of the twelve weeks with a peak in Week 8 (m = 2.30; SD = .64) and with the lowest average mean score occurring in Week 9 (m = 1.57; SD = 2.07); similar low scores were also observed in Week 1 (m = 1.61; SD = .94) and Week 7 (m = 1.61; SD = .84). Like the eighth item, the highest endorsement was with classes using ESP materials while the lowest were in classes instructed with EFL materials. The tenth item in the weekly questionnaire, "Valuable", plotted in a similar manner to the previous item (Figure 9). While the lowest mean average was in Week 1 (m = 1.57; SD = 1.07), the highest endorsed mean in Week 8 (M = 2.26; SD = .79) was preceded and followed by drops in the mean average in Week 7 (m=1.63; SD = .94) and Week 9 (m = 1.61; SD = 1.07). These low points occurred in classes where EFL materials were used in instruction while the peak occurred in a class utilizing ESP materials.

Table 14

Weekly Results: ANOVA

		Sum of Squares	df	Mean Square	F	Sig	η^2
Important	Between Groups	13.835	11	1.258	1.381	.177	.026
	Within Groups	538.284	591	.911			
	Total	552.119	602				
Satisfying	Between Groups	15.761	11	1.433	1.428	.156	.024
	Within Groups	593.177	591	1.004			
	Total	608.939	602				
Easy	Between Groups	41.544	11	3.777	1.948	.031	.035
	Within Groups	1145.873	591	1.939			
	Total	1187.416	602				
Interesting	Between Groups	12.506	11	1.137	1.051	.399	.019
	Within Groups	642.484	591	1.081			
	Total	662.687	602				
Rewarding	Between Groups	20.203	11	1.837	1.689	.072	.030
	Within Groups	642.484	591	1.087			
	Total	662.687	602				
Effortless	Between Groups	26.596	11	2.418	1.455	.144	.026
	Within Groups	982.005	591	1.662			
	Total	1008.60	602				
Useful	Between Groups	13.103	11	1.191	1.336	.200	.021
	Within Groups	526.980	591	.892			
	Total	540.083	602				
Appealing	Between Groups	23.208	11	2.110	2.006	.026	.035
	Within Groups	621.542	591	1.052			
	Total	644.75	602				
Necessary	Between Groups	25.499	11	2.318	3.383	.000	.059
	Within Groups	404.922	591	.685			
	Total	430.421	602				
Valuable	Between Groups	20.369	11	1.852	2.020	.025	.041
	Within Groups	541.664	591	.917			
	Total	562.033	602				
Good	Between Groups	8.610	11	.783	.868	.572	.015
	Within Groups	532.793	591	.902			
	Total	541.403	602				
Absorbing	Between Groups	13.430	11	1.221	1.141	.326	.021
	Within Groups	632.212	591	1.070			
	Total	645.642	602				
Enjoyable	Between Groups	10.172	11	.925	.858	.582	.016
	Within Groups	636.846	591	1.078			
	Total	647.018	602				
Meaningful	Between Groups	13.606	11	1.237	1.419	.160	.028
	Within Groups	515.223	591	.872			
	Total	528.829	602				
Agreeable	Between Groups	14.161	11	1.287	1.211	.276	.023
	Within Groups	628.400	591	1.063			
	Total	642.561	602				

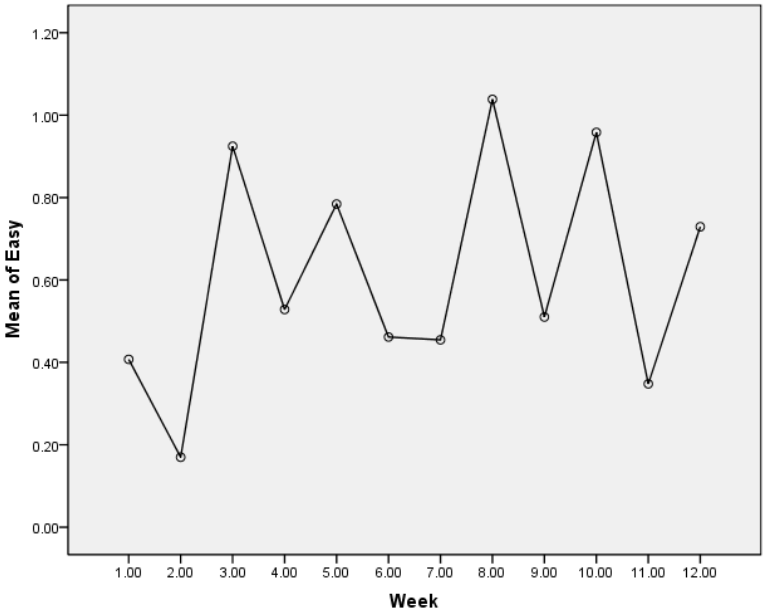

Figure 6. Means plots for "Easy".

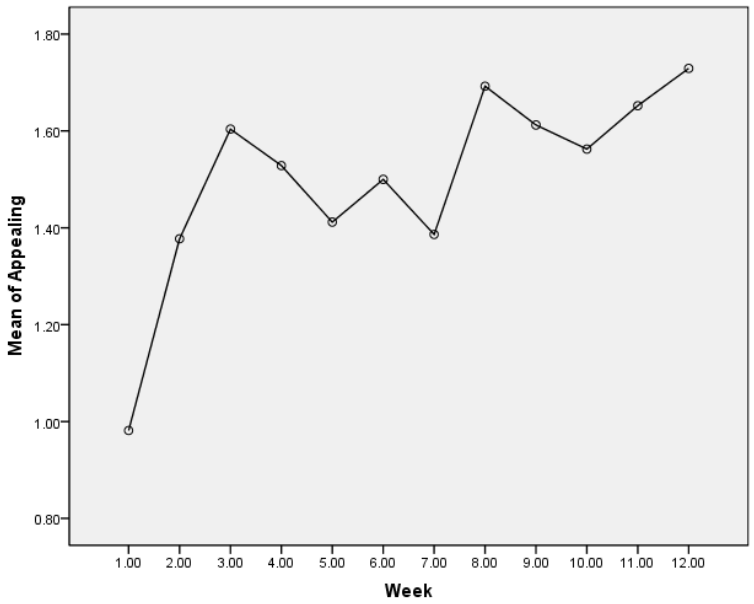

Figure 7. Means plot for "Appealing".

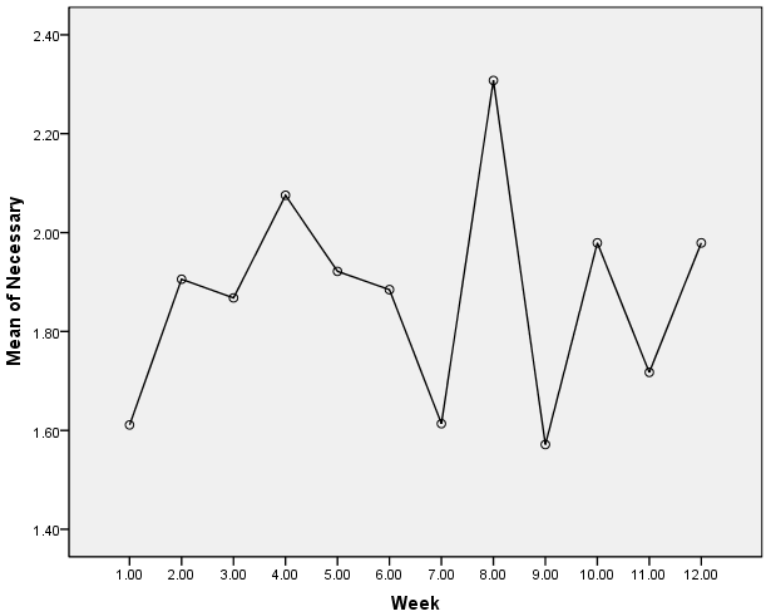

Figure 8. Means plots for "Necessary".

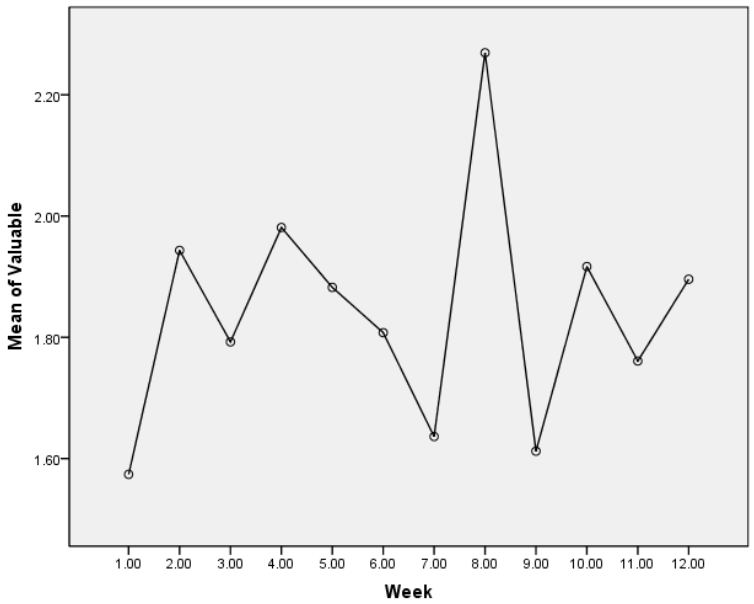

Figure 9. Means plot for "Valuable".

4.3 Interview Results

Semi-structured interviews were administered in the fifteenth week of the study. Within the interviews the participants were asked about instructional materials they liked and disliked in the past, as well as their preferences in regard to the materials used in the current class (see Table 4 for base questions). Responses were sorted, coded and analysed according the procedure outlined in Section 3.3.3.1 above. The data produced from this procedure are presented below.

4.3.1 Instructional Materials Used in the Past: Preferences

The first topic discussed in the interview was instructional materials used in the past. The participants were asked to identify any types of English learning materials they had liked using in the past, and to explain reasons for such preferences. As this question covered a broad period of time (approximately eight years of English instruction, ranging from junior high school to the sophomore year of university), and recall might be an issue for some students, they were encouraged to provide any information they could on this question, ranging from specific text titles to general genres. Responses to these items have been itemized in Table 15. The participants responded by identifying specific titles of a number of past textbooks they recalled, or by identifying general genres of textbooks they liked using. The specific titles mainly included required high school English course books such as Next Stage (n=2), and supplementary materials for university entrance exams (*Sokudoku Eitango* n=2; *Chokuzen Zemi* n=1). A further specific title included *Shinkiso Eigo*, a text for NHK (*Nihon Hoso Kyokai*: Japan Broadcasting Corporation) radio's English lessons. Although graded readers are included within the general genre category, Student 4 did identify specific graded readers he found interesting (Apollo 11 and Conan Doyle's Sherlock Holmes). Other general genre categories included reading, vocabulary, and manga-based texts as well as magazine articles.

Participants further described the qualitative features of English instructional materials that contributed to their appeal in terms of their characteristics, content, and design features. The most frequently cited characteristic was the interest generated by materials (n=5), followed by their ease of comprehensibility (n=4), ease of use (n=2), usefulness (n=2), necessity (n=1), and clarity (n=1). These qualitative features appeared to contribute greatly to the overall perceived value of instructional materials, as evident

with Student 1 who, despite not finding parts of a particular textbook interesting, found it being "useful" and therefore valuable overall: "Some (stories in the text) were interesting, some weren't really, and some I had absolutely no interest in. But overall, I found the book useful and so that gave me interest in it".

Table 15

Past EFL Materials: Preferences and Features

Title / Genre	n	Characteristics	n	Content/design	n
Sokudoku Eitango	2	interesting	5	structure	4
Next Stage	2	easy to understand	3	study abroad	2
Chokuzen Zemi	1	easy to use	2	supplemental	1
Shinkiso Eigo	1	useful	2	communication	1
reading	1	necessary	1	short (length)	1
vocabulary texts	1	clear	1	listening	1
manga	1			writing	1
magazine articles	1			easy	1
graded readers	1				

Content and design features describe particular content aspects included in the instructional materials that students liked using; this is distinct from the genre classification above in that it refers to a particular skill or content feature within a broader range of features (for example, it would refer to grammar exercises within a general English textbook, rather than a grammar textbook). Design features include structural and layout features which make up the overall presentation of the materials' content. In terms of content and design features of instructional materials, structural aspects of texts were most frequently mentioned (n=4). These structural aspects included procedural features, such as the story to vocabulary procedure with supplemental examples (Student 1), pre-learning vocabulary before passages (Student 2), and self-development of content that can be subsequently shared with others (Student 7). Other structural feature preferences involved question layout format preferences (Student 3), and length. Content features appealing to students included study abroad, listening, writing, and other supplemental materials. For participants such as Student 2, these supplemental materials or units had specific appeal due to their relevance to their broader goals: "For some universities, in the, uh, supplemental entrance exams, essays were required, so it was useful to study it and necessary."

4.3.2 Materials Disliked Using in the Past

In order to shed more light on the participants' attitudes towards English learning materials used in the past, they were asked to identify materials they did not like using in past EFL classes. Like with the previous item, responses fell into three categories (see Table 16). The first category describes the whole textbooks in terms of title or genre. As opposed to past materials liked, only two specific text titles were identified: *Sokudoku eitango* and Progress, the former being a required supplemental vocabulary text and the latter a course book. The students also identified books that were entirely writing, reading, or grammar as genres they disliked. These types of texts are generally used for university test preparation in Japan, and their limited scope appears unsatisfactory to some students:

> …there's the Center Test, I didn't like the kind of studying we did for that. Those texts, we'd look at problems from the Center Test, and just do that, just that, this is the adjective, this is the verb, looking at the sentences and passages, just for the test, I didn't like that. (Student 8)

The second category of responses was qualitative characteristics of the texts they disliked. They particularly did not like materials that were uninteresting (n=3), or difficult (n=2). The third category, content or design features, contained the most responses. The most frequently cited content features that participants disliked were grammar (n=4) and vocabulary (n=4) exercises. Related to these types of exercises, participants expressed negative feeling towards activities involving memorizing (n=3), as exemplified in the following response,

> I like to remember words from writing them down, but with that book it's just remembering and drilling…Up to the end of junior high school we'd learn from writing, but in high school it was more just memorizing with that kind of book. I think that wasn't a good way for me to learn English. (Student 3)

In terms of design features, individual participants found insufficient explanations (n=1) and a lack of supporting audio (n=1) as negative aspects of some materials used in the past.

Table 16

EFL Materials Disliked Using in the Past: Types and Characteristics

Title / Genre	n	Characteristics	n	Content/design	n
Sokudoku Eitango	1	uninteresting	3	grammar; grammar translation	4
Progress	1	hard/difficult	2	vocabulary	4
grammar	2	didn't understand	1	long passages	3
writing	1	inappropriate	1	memorizing	3
reading	1	hard to endure	1	insufficient explanation	1
				insufficient supporting audio	1

4.3.3 Preferred Genre of Materials

The third topic discussed in interviews was students' preferences in terms of the two instructional material genres used in class. The majority of students stated that they preferred the ESP materials (n = 6). This was followed by those who preferred the EFL materials (n = 3). A single student (n = 1) stated that they liked both genres of materials equally. Reasons cited for these preferences are summarized in Table 17. The most frequently cited reasons for learners' preferring the ESP materials were that their appeal to learners' interests, perceived practical value, and relative novelty. Perceived practical utility can be seen as particularly important to some students who viewed the language as useful in their engineering studies. The following comment reflects this sentiment:

> Hmm, there were a lot of, um, useful things. Like even just the numbers, for measuring and saying sizes, was useful, and sizes and shapes. I'm learning aerospace engineering, and these seemed like things I would really use, they seemed practical in that way. (Student 7)

The importance of interest in initiating positive attitudes towards instructional materials can be observed in the following sample response, which shows how initial interest can evolve into a broader appreciation for the practical value of the ESP materials' content:

> …as an engineering student, I'd have to say that…I'd really use these, for example the electronic items, and the Skycar lesson, and the English we used. I think I'll really use these. But to begin, at the beginning, I found these interesting and that caught my interest, and then I wanted to study them more. (Student 8)

In terms of the relative novelty of materials affecting a positive influence on particular learners, participants stated that ESP instructional materials containing new technology, (i.e., the sky car); new facts (i.e., famous building heights), or new technical English

(i.e., vocabulary for stating specifications, describing materials) were appealing due to their novel nature. Other stated positive characteristics of the ESP materials were their presentation of technical vocabulary, their activity types, and their content appeal (specifically their appropriateness to engineering students).

The leading reason for EFL materials preference was their perceived communicative value (n=3). Two students stated that these materials provided an opportunity to practice the type of English they would normally use on a daily basis (Student 3, Student 9). Relatedly, the situational speaking practice EFL materials provided appeared to be another attraction; as Student 6 commented, "I like the situation, with people talking, the conversation focus is more interesting for me. I thought I could imagine the situation, and me using English in that situation, I liked that*"*. Other practical applications for the general EFL materials included their utility for travel overseas, study abroad, and ordering in restaurants. One student expressed a preference for the structural design of the EFL lessons, specifically describing the dialogue to vocabulary practice design as appealing.

Table 17

Cited Reasons for Materials Preferences

ESP materials	n	EFL materials	n
matched interests	3	practical for communicating	3
useful/practical	3	situation (dialogues/speaking)	2
novelty	3	travel overseas	2
technical vocabulary	2	study abroad	2
liked activities	2	dialogue/vocabulary structure	1
content appeal	2	restaurants	1

4.3.4 Perceived Future Value of Materials

The fourth interview topic involved discussion of which genre of material students thought more useful for their futures. ESP materials were most frequently cited as having more future utility (n=5), followed by EFL materials (n=3), and both types being equally valuable (n=2). Future value did not necessarily correlate with preferences (Topic 3) with six students' responses indicating that the instructional materials they thought more useful for their futures was not the same as the materials

they preferred. Examples include Student 5 and Student 6 who preferred ESP materials but thought EFL materials more valuable in the future, and Student 9 who preferred EFL materials but found ESP materials to be potentially more valuable. Student 6 and Student 8, while preferring EFL and ESP materials respectively thought both genres equally valuable in the future. Student 3, while liking both genres equally, ultimately thought the ESP materials more valuable for their future.

Stated reasons for the perceived future value of specific genres are summarized in Table 18. For ESP materials, the most frequently citied reason was the perceived usefulness of the instructional materials' content in future jobs. While several students more generally referred to the professional value of the ESP content, one participant explained in detail how he envisioned the ESP tasks could be applied in future job situations,

> When I work for a company, I think these, for example in meetings, when I have to explain something in English, this type of English would be useful, would help me explain things, like with the explaining about the house, if I couldn't explain well, my partner couldn't do it, so I think that kind of practice is good. (Student 9)

While technical vocabulary (n=2) and engineering content (n=2) were also both described as having future value, the potential academic value of ESP material content was discussed in detail. According to Student 3, the ESP materials' vocabulary had specific potential relevance to their future studies: "From now on I'm going to have read academic articles in English, so the vocabulary in these will be useful I think…." Also discussed in detail was the potential descriptive value of ESP materials, as Student 6 explains, "I think the [ESP materials], they would be useful for describing things, their shapes and how they work".

Stated reasons for the perceived future value of EFL materials were led by their future application in communicating in English. A number of students appeared to recognize the global importance of English, and the fundamental importance of learning to communicate. These sentiments are expressed well by Student 5, who stated "I think I need to communicate in English, I think it's necessary now in the world. So I think I need to communicate first, these [EFL materials] are more important to communicate with people, and practice, this is important". Other stated reasons were the perceived value of the vocabulary and listening skills they imparted.

Table 18

Materials Future Value and Relevance

ESP preferred reasons	n	EFL preferred reasons	n
useful for jobs	3	need to communication	4
technical vocabulary	2	learn words easily	1
engineering content	2	listening practice	1
for academic career/research	1		
for describing things	1		

4.3.5 Materials and Lessons: Specific Likes and Dislikes

The fifth interview topic focused on which specific types of lessons or activities learners liked within the two genres of instructional materials. It was hoped that a better understanding of learners' experiences with, and attitudes towards, individual lessons or activities would help explain their evaluations of the wider sets of instructional materials used. This topic resulted in twenty (n=20) distinct responses, of which sixteen (n=16) specifically identified ESP activities (see Table 19). The most preferred activity type within the ESP materials was the quiz activities (n=5). This type of activity involved participants either answering quizzes related to the topic as a warm up activity, or developing their own quiz questions and challenging their classmates to answer their questions in later stages of the lesson. The second most frequently cited activity was the house design activity, which involved students using shapes to design simple houses, and then orally providing instructions to their partner to draw the designed house. While difficult, it appeared to be an interesting experience for some learners, as evident in this response from Student 9: "As I said before I liked the, uh, house lesson. That was a … good experience, to see if my partner understood my directions. It was difficult but interesting". Another general type of activity liked by multiple learners (n=3) was the use of technical specifications, or 'specs'. According to Student 2, "learning and using specs is really useful in mechanical engineering, and this activity kind of brought everything together, I thought it was useful". Other activities liked by single students included identifying and drawing shapes, identifying materials, warm-up activities (in general), examining how devices work, and discussing electronic items. EFL activities liked included the dialogue practice and food and drink activities. A single activity type was liked across both genres, dictations (n=2), with students expressing that they particularly liked "listening (and) filling in the words in the conversations" (Student 5) and "listening at natural speed" (Student 8).

Comparatively, fewer activity or lesson types were identified as being disliked by the students (see Table 20). In fact, only nine (n=9) activity or lesson types were disliked, with two student saying that they liked all the activities (Student 1, Student 2). Overall, the most disliked activities were those associated with memorization. The EFL materials included several picture activities that required students memorize a picture and then ask and answers questions pertaining to the details of the image. Although students seemed to recognize that the activity was intended to be a game, ultimately they found that their self-perceived inability to remember things rendered such activities as disagreeable. These sentiments are evident in the following response:

> I didn't like the memory activities, where we'd look at the pictures and ask each other questions, and uh, yeah, try to answer from memory. Actually it is kind of a game, but I'm not good at that (laughs), so I didn't like it, yeah, my memory is not good for this kind of activity, it's not difficult, I just can't remember things quickly (laughs). (Student 5)

Table 19

Lessons and Activities: Preferences

ESP activities	n	EFL activities	n	both genres	
Quiz activities	5	dialogue	1	dictations	2
House activity	3	food and drink	1		
Specs	3				
Shapes	1				
Materials	1				
Warm-up	1				
How does it work?	1				
Electronic items	1				

A further activity disliked in the EFL materials was a conversation dialogue in which one of the characters was perceived negatively. Student 7 perceived one of the characters in the dialogue to be rude, and this negatively affected his impression of that particular dialogue activity. Two activities in the ESP materials were interpreted negatively by individual students. Student 1 disliked the warm up and dialogue activities that opened Lesson 10. The connection between the technical diagram and the new language was difficult for the student, and, as he explained, "when I couldn't connect the picture with the meaning, it made me uneasy, like trying to understand the technical diagrams from just the diagrams". Another student (Student 9) disliked the fourth lesson due to the difficulty of its vocabulary. The learner found not only the

meaning of the vocabulary, but also the pronunciation of the new technical words, to be difficult enough to negatively affect their impression of the lesson.

Table 20

Lessons and Activities: Dislikes

ESP activities	n	EFL activities	n	both genres	n
technical diagram	1	memory activity	5	difficult activities	1
shapes (vocabulary)	1	dialogue content	1		

4.4 Post-class Instructor Observation Notes

Instructor post-class observation notes were recorded following each class session. Observation notes were mainly descriptive in nature, recording the instructor's objective recollections of how students responded to the specific activities and tasks presented in each class session's instructional materials. In order to focus the data, coding was limited to information pertaining to the role of the instructional materials on motivated language learning engagement. A two-step coding process was used, with first-round coding producing 244 codes. These codes were then grouped and organized through recursive process of reducing and reorganizing. Through this process it was revealed that the type, content, and characteristics of instructional materials were observed to play important roles in language learning engagement, and that classroom variables, including individual and group characteristics, also contributed to engagement. These results are summarized in Figure 10.

The factors represented in Figure 10 were seen as either acting as independent stimulus for engagement, or as interacting with one another on a number of levels. In order to facilitate analysis of how these factors were observed to operate, discussion will begin with how factors related to the instructional materials themselves affected observed language learning engagement. Thereafter, individual and group classroom factors that appeared to influence instructional materials engagement will be discussed in the subsequent subsection.

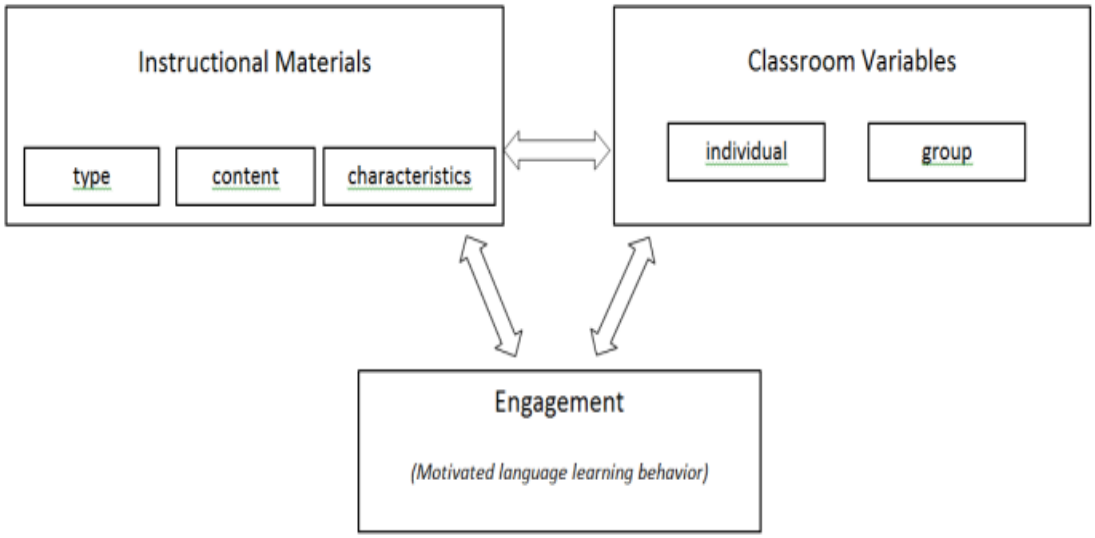

Figure 10. A schematic representation of observed factors contributing to engagement with instructional materials.

4.4.1 Instructional Materials: Activity Types

The factor "types" refers to the activity and task types that comprise a set of instructional materials. In this study activity and task types included warm-up, cloze, discussion, dialogue, vocabulary, listening, and speaking activities. The different types of activities were observed to produce varying degrees of engagement. The majority of types of activities and tasks were inconsistently engaged, with content, characteristics, and classroom factors contributing to their uptake. However, cloze exercises, dialogue practice (particularly pronunciation and intonation practice), and mini conversation activities were all consistently highly engaged regardless of other factors.

4.4.2 Instructional Materials: Content

Content was observed to play an important role in student engagement of the instructional materials, both holistically, and in terms of individual types of activities. Overall, the ESP materials were observed to be more highly engaged than the EFL materials. Technical topics appeared to be of distinct interest to students; specifically, materials containing machines, numbers, technical specifications, dimensions, buildings,

shapes, materials, design, functions, operations, electronic items, and technical problems. While EFL materials appeared to be less stimulating overall, activity content which included food, hobbies and travel appeared to be positively embraced. In terms of specific types of activities, the students were observed to be more engaged in warm-up, vocabulary, and speaking activities that involved technical content.

4.4.3 Instructional Materials: Characteristics

Observations revealed a number of characteristics in the instructional materials that appeared to influence motivational engagement. Characteristics refer to design or qualitative features of the activities and tasks comprising the instructional materials. The most prevalent observed characteristic was the relative degree openness of tasks and activities. Openness is the degree to which activities require students to expand upon, or improvise with, the language being learned in the activity. This usually takes the form of asking and answering original questions related to the topic as an expansion activity. The degree of openness extends to activities that can be considered "closed", those which require no improvisation or original use of the language. Closed activities include matching, substitution (with provided alternatives), repetition, listening comprehension, and dialogue practice from scripts. The observational data revealed that activities that were more closed in nature, including cloze activities, dialogue practice, listening comprehension activities, and vocabulary matching, were the most consistently engaged by students. Learners' responses to the degree of openness were particularly observable in vocabulary exercises, which were usually multi-part, beginning with closed activities such as matching words to pictures, then subsequently requiring more open use of the language, such as having the students using the new vocabulary to ask classmates related questions. While all students were highly engaged throughout the closed portion of these activities, engagement changed markedly when the vocabulary exercises expanded to more open tasks. While a number of students embraced the opportunity to use the target language in new or original ways, others responded by withdrawing or becoming less engaged. A few students withdrew from participating in open activities entirely.

A related characteristic that appeared to affect engagement was difficulty. The relative difficulty of activities and tasks within the instructional materials was observed to have both positive and negative effects on engagement. A number of students appeared to enjoy the challenge of difficult vocabulary, listening and speaking activities,

while with others this difficulty appeared to lead to disengagement. Engagement stemming from the difficulty of vocabulary and speaking exercises appeared to be mediated somewhat by content; where some students appeared more motivated to challenge difficult ESP materials, but then become easily disengaged when doing difficult EFL materials.

Other characteristics of materials that appeared to affect motivated engagement involved design features. Visual aids in the form of pictures and technical diagrams appeared to draw interest and engagement across a broad range of activities. In particular, images of a technical nature (machines and devices) drew students' attention not only to the specific activities of which they were a part, but also appeared to stimulate ongoing interest. Particularly with the aerospace engineering students, images of the sky car, Leonardo DaVinci's parachute, and the gyrocopter, all stimulated ongoing discussion throughout the class. Within the EFL materials, the students responded to images that contained humour, and were particularly amused by the variety of interesting characters and scenes depicted. However, interest in the image content did not appear to extend beyond the activity at hand as with the images within the ESP materials.

A number of other design characteristics appeared to stimulate engagement in learners. Activities designed around quizzes, and related speaking activities and games, were highly engaged by students. While these types of activities were part of both genres of materials, the ESP materials contained a broader variety of these activities, and many of the ESP lessons culminated with student-developed quiz activities based on that lesson's language topic. Other design characteristics that appeared to promote engagement included novelty features; that is learning and using English in new ways, such as through designing buildings, measuring items within the classroom, and discussing functions while looking at electronic items. Again, these types of features were present primarily in the ESP materials.

4.4.4 Classroom Factors: Individual Differences

A number of individual factors appeared to play a role in student engagement. One important factor observed was individual learning styles. Preferences for open vs. closed types of materials, discussed above, can also be a reflection of learning style preferences. While some students preferred a more passive type of learning, as seen in

the more closed types of activities, others appeared to be interested in actively experiencing and manipulating the target language in new ways. A preference for a more kinaesthetic, or hands-on, learning style was observed across most students as they became highly engaged in activities involving using tools or simulating functions or actions with gestures. Another individual factor that appeared to influence engagement was interest. Clearly students were more interested in some activity types and content than others. Overall, it appeared that the technical topics stimulated more interest in learners, and that this interest contributed to motivated engagement. Students' past experiences also appeared to play a role in the degree to which they could engage particular activities. Students who were observed to be lacking particular experiences such as travel, or seeing famous people, appeared disengaged in activities requiring discussion of such topics. Willingness to communicate (WTC) appeared to be another related factor influencing engagement of select activities. Particularly in activities involving topics in which students had little interest or experiences, some participants withdrew and failed to cooperatively communicate at times; not even providing their partner the opportunity to express themselves. This lack of WTC was observed primarily in EFL activities while learners appeared more willing to interact when engaging technical topics within the ESP materials. A final individual difference that was observed to influence motivational engagement of the instructional materials was proficiency. While the two observed classes were of similar overall proficiency, there was a range of individual proficiency levels in each class. Several less-proficient students appeared to become disengaged in listening, vocabulary, and speaking activities when those activities became too demanding.

4.4.5 Classroom Factors: Group Dynamics

Other factors contributing to how students engaged the instructional materials appeared to stem from group factors. A readily observable difference between the two classes observed was their overall group dynamic. Where the first class was observed to be quiet and reserved, the second class was consistently more outgoing and engaged. The instructor observed that the primary motivational issue with the second class was not how to initiate motivation, but rather how to sustain the highly motivated state with which they appeared to enter to the classroom. Within this highly motivated class there appeared to be group norms that included expectations about participation and cooperation. These qualities were observed to positively influence motivated language

learning behaviors and engagement with the instructional materials. With both classes, smaller group and pair work appeared to provide a supportive atmosphere in which students could work together to solve problems and overcome difficult language (particular in the cloze and vocabulary activities), and practice and use the language with the support of their peers.

4.5 Summary

The results of the four data collection instruments produced a variety of insights into the motivational influence of ESL and EFL instructional materials on the sample examined. The IMMS was positively endorsed overall for both genres of materials, with satisfaction and relevance scales being most highly endorsed. The Confidence scale, while still being positively endorsed (although slightly), was the least endorsed overall for both sets of materials. The only statistically significant difference between scales across genres involved the Relevance scales, which were endorsed significantly higher in the ESP materials. All scales demonstrated strong positive inter-correlations with the exception of REL and CON whose correlational relationship was observed to be insignificant across both genres of materials.

In regards to individual items, the most endorsed EFL items were from the Satisfaction and Relevance scales (SAT6, REL2, REL3, REL4), while items from the Satisfaction, Relevance, and Attention scales (SAT6, REL7, REL 3, ATT12) were most highly endorsed for ESP items. The least endorsed individual items from both scales were all confidence items (EFL: CON2, CON1, CON7, CON4; ESP: CON7, CON1, CON2, CON5). Statistically significant differences between individual items across genres were observed between REL1, REL7, REL8, CON2, and SAT1, all favouring the ESP materials.

Results of the weekly post-class questionnaires revealed overall positive endorsements of all adjectives, with the highest overall means coming from the Necessary, Absorbing, Enjoyable, and Meaningful ESP scales. Significant weekly differences were observed with Easy, Appealing, Necessary and Valuable scales each of which peaked in weeks where ESP materials were used in instruction.

Interviews revealed that in previous English learning experiences the students preferred instructional materials that were interesting, easy to use, useful and clear while they disliked several entrance test-focused grammar, reading, and writing books,

materials that were perceived to be uninteresting, difficult to use or understand, as well as those containing grammar, vocabulary, long passages, memorization activities, or being without sufficient explanations or audio support.

In terms of the materials used in this study, the majority of the students interviewed expressed an overall preference for the ESP materials. Reasons cited for these preferences included their appeal to the students' interests, usefulness, novelty, and technical vocabulary. Those who preferred EFL materials did so due to their practical value for learning communication, the situations presented in dialogues, as well overseas travel and study abroad content, food-related topics, and the structure of the materials.

In endorsing which materials represented more future value, most students endorsed ESP materials due to their perceived value in future careers and academic research, their technical vocabulary and engineering content, and the general skill practice they provided. A minority of the students interviewed perceived the EFL materials as having more future value due to their communication focus, and the vocabulary and listening practice they provided. Responses indicated that the students distinguished between interests and future value, with several individuals stating that while they may have preferred one type of materials, that they thought the other type may be more useful in the future. This was particularly evident in the students who stated that while they preferred the ESP materials, that they thought the EFL materials were more useful for basic communication in the future. A pair of students perceived both sets of materials as having equal, but differing, future utility value.

ESP activities were most frequently cited in discussion pertaining to the specific types of activities and tasks that students liked using within the instructional materials, representing 80% of the total responses. Participants also described a preference for ESP activities involving the description of technical specifications, design, and functions of technical items, as well as the weekly dictation/cloze activities used in both EFL and ESP materials. Within the EFL materials, activities that involved everyday communication practice in the form of dialogues, restaurant role plays, and dictations were positively endorsed. There was comparatively fewer activity types cited as being disliked by learners. Within the ESP materials students disliked activities with difficult diagrams and technical terms that were hard to pronounce and remember. Within the EFL materials, memory activities were frequently mentioned as being disliked, as were difficult activities.

Engagement was observed to be affected by instructional materials' type, content, and characteristics, as well as individual and group factors within the classroom. Activity types that were more closed in design, such as paired dialogue practice, and mini conversations were observed to be more consistently and uniformly engaged in by participants. Overall, ESP material content appeared to more strongly influence the degree of engagement in learners, with technical and engineering content drawing particular interest. Within the EFL materials, food, hobbies, and travel were all observed to promote engagement in learners. A further factor appearing to influence learner engagement was the characteristics of particular activities and tasks within the materials, including their degree of openness, difficulty, and design features including the presence of visual aids (diagrams and pictures), activities structured around quizzes, humor, and technical themes.

Observed motivational engagement with the instructional materials also appeared to be affected by additional classroom factors, including individual student differences and group dynamics. Individual factors observed to affect engagement included learning styles and preferences, proficiency, experiences, and individual cognitive and affective states influencing learners' WTC and self-efficacy.

Chapter 5

Discussion

The results presented in Chapter 4 provide a number of important insights related to the research questions posed in this study. As mixed-method results tend to have areas of overlap (Cameron, 2011; Creswell, 2003), where this occurs such findings will be discussed as they apply across the different types of data collected as a means of triangulation, and ultimately as a means to enhance reliability. Where themes arise in elicited data from a single data source, particularly in interviews and observations, these will be interrogated and extrapolated upon both as they relate to other themes, and as independent findings that, while requiring further corroboration, provide further perspectives, depth and explanatory insight into learners' motivational orientations towards the specific genres of instructional materials.

5.1 Relevance as a Distinguishing Feature between Genres

Data derived from the four data collection methods indicate that the students positively endorsed both types of materials, but preferred the ESP materials overall. This finding was evident within the IMMS results where an overall preference for the ESP materials was revealed. While the means for the IMMS scales were similar across the three scales measuring confidence, attention, and satisfaction, they were markedly different across the relevance scales which were endorsed significantly higher for the ESP materials. According to Keller (2010), the relevance of a particular set of materials to individual learners depends on the materials' prospective utility, their relative congruence with teaching and learning styles, and how well content aligns with personal interests. While the IMMS provides a general overview of learners' overall preference in terms of relevance, these three thematic areas can be examined in further depth through the data collected by the other instruments utilized in this study. Like the IMMS, the weekly post-class surveys were endorsed positively across both genres of materials, indicating a broad positive orientation toward the instructional materials used in class. However, the highest overall item endorsement means came from the ESP lessons

which learners perceived as being more necessary, valuable, absorbing, and appealing. These adjectives correspond with the key elements of relevance described by Keller above. Relevance also emerged as an important factor in interviews where participants specifically described the utility and interest value of the ESP materials as being positive factors. Instructor observations further corroborated these findings where ESP materials with high utility and interest value were observed to contribute to higher levels of learning engagement in the classroom. Combined, these findings strongly indicate the importance of relevance as an important motivating factor in instructional materials. Due to its importance, this factor will be further discussed in terms of the three elements of relevance identified by Keller (2010).

5.1.1 Relevance and Utility Value

The first element of relevance identified above by Keller (2010), utility, is viewed as a central component in a number of motivational theories, particularly educationally-focused versions of expectancy-value and goal theories. According to Pintrich and Schunk (2001), expectancy-value theories address two components of the learner's cognitive appraisal of a learning situation: the degree to which they expect to be successful in a particular learning endeavour, and the overall perception of value placed of the learning activity. It is this second component that is particularly relevant to Keller's conception of relevance within the IMMS. Research has shown utility to be an important component in the subjective value learners place on learning tasks (Eccles et al., 1983; Wigfield, 1994; Wigfield & Eccles, 1992, 2000). These finding are reflected in this study, where the value aspect of utility was expressed to be an important motivating factor in a number of interviews. One example was Student 1 who explained how perceived utility value fostered motivation despite his otherwise negative impressions of instructional materials used in past EFL learning experiences. He commented that, "Some (*past instructional materials used*) were interesting, but some weren't really, and some I had absolutely no interest in. But, overall I found the book useful and so that gave me interest in it" (Student 1). This example demonstrates the potential importance of utility in influencing learners' overall impressions of instructional materials used in class. The same student later also explained that the perceived utility value of specific instructional materials encouraged him to persevere even if the materials were perceived as being too difficult. The notion of utility being a characteristic that can help learners overcome low levels of self-efficacy has not been

presented in the literature. It does, however, represent a further possible direction for research, and suggests that utility may indeed positively influence other cognitive or affective factors in learners.

Further, three students indicated that the future job utility of the ESP materials resulted in those materials being perceived as more relevant to their future needs. The professional utilitarian value of learning an additional language has been discussed extensively, where it has been found to promote instrumental or extrinsic motivational orientations in learners (Dörnyei, 1990; Gardner, 1985b; Gardner & MacIntyre, 1991). Particularly for FL learners, where opportunities to interact with TL speakers or engage with the TL in authentic contexts is lacking, the utilitarian value of the TL can be an important motivator (Oxford, 1996; Schmidt, Boraie, & Kassabgy 1996). In the interviews a number of students identified the overall engineering content, technical vocabulary, and activity types present in the ESP materials as being factors that contributed to their perceived future professional utility. Learners' ability to identify the professional utility value of instructional materials, and their resultant positive effect on learning behaviour, suggests that this type of material might be of particular value to Japanese tertiary non-English majors such as engineering students.

Complementing the value/utility perspective, relevance can also be viewed through the lens of goal theories. Goals have been demonstrated to play an important role in motivation and performance (Locke & Latham, 1990, 2006). While the sheer number and range of possible goals influencing the individual can be complex (see Ford's 1992 taxonomy for example), they can be efficiency conceptualized according to their degree of specificity. According to Pintrich (2000a, 2000b), goals can be classified according to their level of specificity, ranging from task-specific engagement, to achievement-oriented behaviour, to broad or general learning orientations. Although the majority of goal theory research focuses on approach or avoidance characteristics of achievement-oriented goal-related behaviour (Heimerdinger & Hinz, 2008; Pintrich, 2000a, 2000b), the nature of this study and characteristics of the experimental class situation resulted in this sample's goal-orientation being primarily reflected in task-specific engagement and general learning orientation levels. The broad or general goal orientation level corresponded with learners' career aspirations, and how well the materials related to participants' goal of becoming engineers. The participants' broad professional goal was reinforced by the sense of utility they felt while using the ESP materials. On the specific task-level, a number of learners expressed in interviews, and were observed by the instructor, to demonstrate a high degree of interest and

engagement in successfully completing activities related to engineering as these were perceived as important and valuable in their own right, and therefore capable of sustaining learner engagement. Goals, whether proximal (immediate task-specific goals) or distal (general broad long-term goals such as becoming an engineer), have been shown to influence learners' persistence and ultimate level of achievement in language learning (Koromos, Kiddle, & Csizar, 2011). The fact that ESP materials appeared to stimulate these goals in learners speaks to their potential value in motivating these learners.

5.1.2 Relevance and Teaching and Learning Styles

The second component of instructional material relevance identified by Keller (2010) is the degree to which materials are congruent with learners' teaching and learning style preferences. While congruence in teaching styles did not emerge as an issue with the ESL and ESP materials used in this study, it was mentioned as a factor in FL learning experiences prior to university. Within the interviews several students explicitly mentioned being demotivated by the traditional rote learning and grammar translation materials and methodologies used in preparation for university entrance tests. These materials were perceived as being monotonous and uninteresting. As Student 1 explained:

> (*In class*) we'd just translate one sentence after the other. And then see, on the board, if we were right. We'd check. We'd just continue like that until the story was finished, then we'd do the next one. That was the whole class. I didn't really like it, it wasn't interesting at all.

It is interesting that, although such teaching approaches are considered standard in Japanese English education (Fujimoto-Anderson, 2008; Nishino, 2008; Seargeant, 2009), that some students voiced such strong objections to them. This is important for instructors who might be hesitant to introduce new pedagogical approaches to the classroom for fear that they might not coincide with the way students are usually taught. Japanese students have been shown to view traditional EFL learning methods negatively and as not being effective (Shimizu, 1995; Widdows & Voller, 1991). These sentiments suggest that Japanese FL learners may be not only receptive, but may be eagerly awaiting new pedagogical approaches that present the TL in new and more stimulating ways. This represents an opportunity for teachers to introduce new materials and approaches to learners.

Congruence between learning style and instructional materials produced a wider variety of insights into why learners preferred particular types of materials. Learning styles have been broadly defined as "a general predisposition, voluntary or not, toward processing information in a particular way" (Skehan, 1991, p. 288). In a more detailed description, Oxford (1989) specifies that learning styles comprise cognitive, affective and behavioural elements including attitudes and interests, cognitive styles, preferred learning patterns, and learning strategy orientations. While several learning style typographies have been used in FLL research (Oxford, 1989; Ehrman & Leaver, 2003), a number have used, or integrated, Reid's (1984, 1987) Perceptual Learning Style Preference Questionnaire (PLSPQ), to measure visual, auditory, kinaesthetic, tactile, group learning, and individual learning style of foreign language learners (Mulalic, Parilah, & Fauziah, 2009; Peacock, 2001; Wintergerst & DeCapua, 1998).

In this study, participants demonstrated several learning style preferences. Materials that promoted kinaesthetic and tactile learning appeared to promote the highest engagement in learners. Kinaesthetic and tactile learners prefer learning actively on their own, particularly through experiential learning, and become less engaged in more passive learning situations (Ehrman, 1996a). These characteristics were particularly observed in learner engagement with the ESP materials. Several interviews provided detailed evidence of these preferences. Student 4 described his attraction to the content in Lesson 10, where in learning about a gyrocopter, he was given the opportunity to learn about its operations through simulating its flying functions through visualizing and simulating (through gestures) how to use the control handle. Multiple students identified the house design activity as engaging, particularly the opportunity to design and draw their own house, and then test their description skills with their partners. As Student 10 explained, "With the (*ESP materials*), you could do your own thing more, like design, I designed the house, and then described it to other students, that was enjoyable, and listening to the other students' designs was interesting." This learning style preference applied not only to the ESP materials, but also to particular materials and activities in other EFL classes. An example of this was provided by Student 7, who described self/peer-developed learning materials as his favourite material type used in another English class. In that particular class learners were given the opportunity to create their own stories and design manga to share with other students. Instructor observations further supported a learner preference for kinaesthetic and tactile learning. Activities which were observed to promote the highest engagement were those that involved students creating their own quizzes, discussing and simulating shapes and dimensions with gestures, and those where students actually measured or

simulated dimensions of real or imaginary items within the classroom. While such activities might not be central to most general English courses, their inclusion in the ESP materials explains why those materials appealed to this group of learners; particularly considering engineering students' preference for hands-on learning (Ehrman, 1996a).

Related to the tactile and kinaesthetic learning orientations discussed above was a demonstrated preference for active over passive learning. Passive learning has been identified as a traditional characteristic of Japanese education (Brown, 1994; Fukuzawa, 1998; Sato, 1982; Zhenhui, 2001), and such passivity has been observed in Japanese EFL classroom settings where it has been identified as a barrier to learning (Doyon, 2000; Warrington & Jeffery, 2005; Williams, 1994). Despite these findings, a number of participants in this study demonstrated a strong preference for active learning. Within the interviews, a number of students voiced a dislike for rote memorizing, and passive teacher-led classrooms, with students variously describing such learning as "the hardest to endure" (Student 5) and "terrible" (Student 7). Such students voiced a desire for a more active approach to learning, as expressed here by Student 6:

> In junior high school, it was mostly materials focused on learning new vocabulary. I don't really think, or have the image that, of that as interesting…they were mainly memorizing word lists and that kind of thing, there was also translating sentences, that too…Later, in high school and now in university, it is more interesting. We used more communicative materials and activities. I found that more interesting, speaking was more interesting.

Data collected in instructor observations support this preference as students were observed to be most highly engaged in activities requiring active participation and interaction with classmates. However, observations also revealed that learners diligently embraced certain passive activities as well, such as listening and closed vocabulary exercises; particularly where such activities were perceived as being challenging, useful or interesting. Therefore, while materials containing active learning were more highly engaged overall, it appears that passive activities can also appeal to learners. Materials containing both styles of learning would likely provide the widest appeal. Such materials would also serve to promote multi-dimensional learning, and provide learners with a greater range and variety of opportunities to engage English (Tomlinson, 2000; 2008).

A further learning style preference that emerged was learners' relative tolerance for openness in regard to the individual activities that comprised the

instructional materials used in the study. Closed activities were those which provided all the information necessary to obtain an appropriate answer or conclusion to a given problem or task, while open questions and activities required more imagination, negotiation, and creativity, and culminated in multiple possible outcomes. In terms of learning style preference, this dichotomy is described as closure- versus open-orientation (Oxford, 1992; Psaltou-Joycey & Kantaridou, 2011). The findings gathered here were mixed in regard to this orientation. Of the two classes examined, the second (aerospace engineering majors) was clearly more open-oriented, with students readily volunteering answers to open questions, and developing and creating their own expansion activities (i.e. asking each other additional related questions in English; discussing the topics beyond the parameters of the lesson).The first class (mechanical engineering majors) appeared much more closure-orientated, performing well on closed activities and being much less engaged overall with open-ended tasks. However, this class was observed to engage in open ESP tasks more readily than open EFL tasks. Such a result is encouraging as it indicates that content may encourage students to stretch their learning style preferences given the appropriate stimulus; in this case ESP content related to student interests.

Another learning style that appeared to differ across the two classes was field-sensitivity. Field-sensitivity can be described as the degree to which learners are aware of, and rely upon, their learning context; including other students in the learning environment (Nelson, 1995). Traditionally, Japanese education has placed great importance of group learning and particularly students' responsibilities within groups (Roland & LeTendre; 1998). Japanese students, like other East Asian students, are thus characterized as having more collective or group-oriented learning styles (Ramburuth & McCormick, 2001; Wintergerst, DeCapua, & Verna, 2003), and thus stronger field-dependence. Despite these findings, field-dependence and group orientation have also been revealed to be negatively endorsed in Japanese language learners (Reid, 1987). The results of the current study indicated both orientations, with the two classes under examination varying significantly in terms of group learning orientations. Students in the first class (mechanical engineering majors), particularly in small group activities, were observed to engage other group members inconsistently, with some partners withdrawing cooperation in a manner which prevented their partners from being able to complete some activities. Such behaviour was starkly different from the aerospace engineering majors, who worked well across all group sizes, and appeared to embrace and enjoy collaborative group work. These differences could possibly be attributed to the group dynamics of particular classes, or the individual differences of students

comprising each class. While group dynamics will be discussed below in further detail, the differences revealed here across classes reflect the inconsistencies cited in the studies above, and speak to the difficulty of generalizing regarding learning styles across larger sample of learners.

5.1.3 Relevance: Content and Personal Interests

Keller's (2010) third component of instructional material relevance is content and personal interests. This area is also a component of expectancy-value theories in terms of the degree of personal interest value placed on the content of instructional materials (Pintrich & Schunk, 2002). In terms of explaining why ESP materials were viewed as more relevant to learners, this position suggests that it can be explained by a better fit between content and student interest than the EFL materials. This sentiment was expressed in the interviews, where learners described a particular interest in the technical and engineering content of ESP materials. Student 2 explains:

> …the reason (I prefer ESP materials) is I like technology and machines, and there were a lot of machines in these materials that I've never seen, like, uhhh…this Sky Car (points to picture in the Lesson 2 materials), and it gives the specs which I find interesting…and uh, this part, we used English to explain how it moved, and this one (points to Lesson 4).

In Student 8's interview, he acknowledges that while utility is an important factor, interest in the content was the spark that really initiated his engagement with the materials:

> as an engineering student, I'd have to say that…I'd really use these, for example, the electronic items, and the space ship lesson, and the English we used, I think I'd really use these. But to begin, at the beginning, I found these interesting, and that caught my interest, and then I wanted to study them more.

Teacher observation notes further indicated that learners appeared to be most interested and engaged with the ESP materials' content with their topics even becoming the subject of conversations in post-task interaction. The weekly post-class questionnaire item "appealing" was significantly higher for ESP lessons, with the highest endorsements being in Weeks 4 and 8. As the qualitative data suggest, content was likely a significant contributor to the high endorsement of the "appealing" item in the questionnaire. These results indicate that content interest drew students' initial attention, helped sustain engagement over class periods, and helped serve to reinvigorate appeal

on a week-to-week basis. These results speak to the value of content interest appeal in initiating and sustaining motivation, two characteristics that are at the core of motivated learning behaviour (Pintrich & Schunk, 2002).

5.1.4 Summary: Relevance and Instructional Materials

The relevance of classroom content has been demonstrated to be an important factor in language learning motivation and engagement (Krashen, 1982; Stevick, 1976; Tomlinson, 2008; Wenden, 1987). Due to its established importance, it is vital that a thread of relevance run through classroom activities in order to maintain student motivation; according to Chambers (1999), "If pupils fail to see the relationship between the activity and the world in which they live, then the point of the activity is lost on them…If pupils don't see the relevance of a subject, the teacher has from the outset a major challenge" (pp. 37-38). Even if a learner is not intrinsically motivated, or do not stand to receive clear rewards, they will still engage materials if they perceive them as being valuable and desirable (Dörnyei, 2001). The multidimensionality of Keller's (2010) conception of relevance is valuable as it provides a broader, and more complete, perspective of the constituent components of relevance as it applies to motivational engagement and instructional materials.

However, relevance is not the only factor that determines instructional materials' motivational appeal to learners. In regard to relevance in ESP materials, Hutchinson and Waters (2007) explain:

> There is more to motivation than simple relevance. For the present, suffice it to say that, if your students are not fired with burning enthusiasm by the obvious relevance of their ESP materials, remember they are not machines. The medicine of relevance may still need to be sweetened with the sugar of enjoyment, fun, creativity and a sense of achievement. ESP, as much as any good teaching, needs to be *intrinsically* motivating. It should satisfy their needs as potential target users of the language. In other words, they should get satisfaction from the actual experience of learning, not just from the prospect of eventually using what they have learned. (p. 48)

The multi-dimensional conception of relevance used here permitted the instructional materials under investigation to be examined beyond their simple utility; it also illuminated their appeal in connection to preferred learning and teaching styles and content interest appeal. Attention to these areas in materials development and selection

for engineering students learning EFL seems an appropriate first step in promoting motivational engagement in this segment of learners. However, as Hutchinson and Waters articulate, a number of other factors need to be considered. A number of these areas touched upon in the subsequent sections.

5.2 Other Areas Affecting Materials Engagement

In addition to relevance-related factors, a number of other areas appeared to affect learners' motivational engagement with the instructional materials used in this study. These factors generally fall within group and individual categories. While the discussion involving relevance-related factors originated with findings from the IMMS and Keller's theoretical construct of relevance, the factors below emerged mainly from the qualitative data derived from student interviews and post-class observation notes.

5.2.1 Group Factors

Group dynamics appeared to play a role in how students engaged particular instructional materials. Distinct from group learning style preferences discussed above, group dynamics involve the interactional characteristics of the class as a whole. Group dynamics have been revealed to be an important contributing factor in language learning (Clement, Dörnyei, & Noels, 1994; Prahbu, 1992), particularly in terms of success and failure, with positive group experiences having been observed to positively affect learner motivation and, conversely, negative group experiences having a demotivating effect (Chang 2010; Dörnyei & Malderez, 1997; Falout, Elwood, & Hood, 2009). Instructional materials have also been identified as being an important facilitator of group interaction, particularly in the manner in which they structure cooperative interaction between learners (Dörnyei, 1997).

In this study, engagement in whole class group activities appeared to depend both on the characteristics of particular classes, and subgroups within those classes. Students in the mechanical engineering class demonstrated a wider range of group behaviours in engaging the instructional materials used in the study. This inconsistent engagement appeared due in part to group characteristics and norms. In whole-class activities, most students appeared guarded and unwilling to share and participate in open activities. While this improved somewhat over the course of the semester, with

several students volunteering more and more, overall the class as a whole did not participate readily in open whole-class activities. However, students in this class did appear to work together better in smaller group activities. This engagement appeared to be tied to the content of particular activities, with ESP materials receiving higher engagement. This behaviour differed significantly from the aerospace engineering class, whose members all readily and consistently participated in whole class open activities; volunteering answers quickly and readily, and providing positive feedback and attention to their peers. This class also consistently participated well in small groups, working attentively and providing partners with meaningful and encouraging feedback.

The distinct group behaviours of the two classes appear to be a function of different group norms. Group norms can be defined as the "rules or standards that describe behaviour that is essential for the efficient functioning of the group" (Dörnyei & Malderez, 1997, p. 69). In Japan, norming of group behaviour is an institutionalized component of primary and junior secondary education (Roland & LeTendre, 1998; Sugimoto, 2003), but class-by-class norms appear to form more organically in university cohorts. The two classes observed in this study had very distinct norms in regard to responding to teacher-led open group activities. The first class norms were more passive in nature, with few students volunteering when called upon. The second group was more active in these sorts of activities.

Comparatively, small group behaviours were also distinct, with the mechanical engineering class exhibiting more positive, but still inconsistent behaviour, while the aerospace engineering majors consistently positively engaged the materials within small group settings. The content of materials' activities appeared to be a mediating factor in this behaviour, with the first class showing elevated engagement with ESP materials, particularly while interacting in small groups. While using the EFL materials, individual group members were observed to disengage, with a seeming disinterest in EFL topics appearing to be the main precipitating factor. A distinct goal of group learning is the formation of positive interdependence, where learners rely on one another for learning support and encouragement (Dörnyei, 1997). This forms group coherence, which has been demonstrated to facilitate learning (Dörnyei & Malderez, 1997; Evans & Dion, 1991). A willingness to participate in basic tasks is essential for promoting peer interaction, and is important in promoting meaningful individual practice and peer interaction (Philp, Walter, & Basturkmen, 2010). The ESP materials appeared to promote a sufficient degree of interest to engage the learners, which in turn appeared to help generate the coherence required to maximize group learning processes, with all

learners engaging classmates in groups and displaying interest and cooperation. The observed variability of learner behaviour in groups appears to be affected, at least somewhat, by the nature and content of the instructional materials used. This is an important finding as it provides some insight into the causes of fluctuations in group engagement in the Japanese EFL classroom as observed by Nitta and Asano (2009).

5.2.2 Individual Factors

5.2.2.1 Inconsistent engagement and WTC

Instructor observations revealed that individual participation was inconsistent for a number of individuals. At times such learners appeared keen and willing to interact and communicate with their classmates, while at other times the same students appeared withdrawn and unwilling to interact. WTC has been examined in language learning contexts as a distinct individual difference in learners (Dörnyei & Skehan, 2003). WTC has been generally defined as the degree to which the learner willingly uses the TL for communication (MacIntyre et al., 1998). WTC is particularly important as it has been shown to affect the amount learners actually use the target language (Cao & Philips, 2006; Clement, Baker, & MacIntyre. 2003; MacIntyre & Charos, 1996). With Japanese learners a strong connection between language learning motivation and WTC has been demonstrated, and these in turn have been tied to self-confidence, proficiency and frequency of communication (Yashima, 2002; Yashima, Zenuk-Nishide & Shimizu, 2004).

While WTC has long been recognized as an individual trait in language learning (MacIntyre, Dörnyei, Clement & Noels, 1998; MacIntyre & Doucette, 2010), its characteristics as a state phenomenon has recently become a focus of research (Baker & Macintyre, 2000; Cao & Philip, 2006; Kang 2005; MacIntyre, 2007). This is particularly relevant to this study as it examines the situation-specific characteristics of learners' responses to particular instructional materials used in the classroom context. Kang's (2005) construct of situational WTC provides a useful theoretical framework to consider the results obtained in this study. Kang defines situational WTC as "an individual's volitional inclination towards actively engaging in the act of communicating in a specific situation, which can vary according to interlocutor(s), topic, and conversational context, among other potential situational variables" (p. 291). Within Kang's construct situational variables are seen as combining with psychological

antecedents to produce situational WTC, which then combines with trait-like WTC to produce the individual learner's ultimate WTC. The situational variables include four categories: the topic, interlocuters, conversational context, and other potential variables. The topic variable includes such factors as the learner's degree of interest, their relative knowledge, personal experiences, sensitivities, and prior experience discussing the topic. The interlocutor variable includes factors such as proficiency, familiarity, and the content of their responses. The third variable, conversational context, refers to the specific stage to which a conversation has progressed. An additional open category includes any other potential variables that may arise and affect WTC. These variables and their constituent factors are seen as affecting psychological antecedents such as the learners' feelings of security, excitement and responsibility in particular situations. Students' behaviors and engagement as recorded in post-class instructor observations notes reflected a number of the factors presented in Kang's framework. Students were observed to be selectively engaged, with the instructor specifically noting that interest in, knowledge of, and personal experiences with particular topics appeared to influence engagement in particular activities or tasks. Additionally, observation results aligned with Kang's interlocutors variable on a number of factors, specifically the relative familiarity with and number of interlocutors, and the interest, attitude, and responses they provided. A number of students were observed to generally interact well with partners, but when their partners became disengaged, they did as well. Rather than encouraging and trying to motivate an unresponsive partner, they simply adopted the same behavior. ESP materials appeared to play a role in fostering interest and positive attitudes, and in doing so appear to have been more facilitative in terms of promoting situational WTC in learners.

5.2.2.2 Confidence and materials engagement

Another factor that appeared to affect engagement with instructional materials was learners' self-perceived level of efficacy in being able to complete particular tasks or activities. Self-efficacy has been identified as an important factor in Japanese EFL learners, where a low self-estimation of English abilities has been shown to negatively influence motivation to learn and use the language (Abe, Shimizu, Okudo, & Ishizuka, 2010; Burden, 2000; O'Donnell, 2003; Tsuchiya, 2006). In the interviews, the participants described an aversion to materials used in the past that they felt exceeded

their proficiency levels, specifically describing a dislike for difficult materials and a preference for materials that were clear and easy to use.

An important finding with the materials used in this study was participants' aversion to English learning materials that required a particular skill they lacked confidence in, specifically, memorization. This was particularly evident with the EFL materials, where several lessons contained activities that required learners to memorize details of a picture and then quiz each other from memory. Although the activity was structured as a "memory game", intended to be an enjoyable way for students to use and expand upon the target language being studied, it appears to have caused anxiety in a number of students. In fact, half the students interviewed (n=5) expressed a dislike for this particular activity. For most, this dislike was attributed to a self-perceived inability to memorize, as explained by Student 8:

> Well I'm not good at memorizing, so the memory quiz activity, I can't remember anything, so it's not good for me. Even if I tried I couldn't remember, so I didn't like that part because I couldn't do it well.

This finding was supported by the observation data, where a number of learners were observed to disengage during the memory activity portions of the class. This finding is important in that it identifies particular characteristics of activities which undermined students' self-efficacy in English learning. Japanese EFL learners who are unsuccessful in English learning tend to internalize attribution for failure (Gobel & Mori, 2007; Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997), and such attributions contribute to on-going negative evaluations of efficacy in learners. Knowledge that learners perceive certain types of activities as difficult, or even impossible, can help teachers avoid activities which may have a debilitative effect on self-efficacy.

In contrast, the content of some instructional materials was also seen to have a facilitative effect on the self-efficacy of certain learners. As mentioned in the above discussion regarding utility and relevance, Student 1 explained that ESP materials that were perceived as being useful inspired him to persevere even if he thought such materials were too difficult. Similarly, another student expressed satisfaction with ESP materials that were "difficult but interesting" (Student 9). While students clearly expressed a dislike for difficult materials in interviews, it appears that perceived interest or utility can facilitate positive attitudes that encourage learners to engage challenging English texts that they may otherwise perceive as being too difficult. These findings indicate that attention should also be paid to content and activities that promote efficacy

in order to enhance learners' engagement with, and attitudes towards, instructional materials.

5.2.3 Instructional Materials' Contribution to Peak Performance and Flow

The results discussed above suggest that particular characteristics of instructional materials appear to influence learners' attitudes and behaviours in the classroom. Viewed over the course of the semester, the variability of attitudes and behaviours provide glimpses into how instructional materials contribute to peak language learning experiences. As demonstrated above, at any given time a number of factors can influence how learners perceive, and respond to, a particular set of instructional materials. In the present study, learners appeared most affected by materials' perceived relevance value as well as a number of group and individual factors. At times these various factors seemed to align to create instances where learners appeared completely absorbed in particular activities such as measurement tasks, machine specification activities, technical item quizzes, and designing and describing objects. In such instances learners appeared to value the task at hand, embrace its inherent learning characteristics or style, and work well with others. As these factors aligned learners' behaviour appeared to reach a state of, what Csikszentmihalyi (1991, 1997) terms as, "flow". Flow has been described as "the way people describe their state of mind when consciousness is harmoniously ordered, and they want to pursue whatever they are doing for its own sake" (Csikszentmihalyi, 1991 p. 6). Such moments generally occur whilst an individual is engaged in artistic, athletic or spiritual pursuits, but are also evident in peak language learning experiences (Egbert, 2003; Schmitt & Savage, 1992, Schmidt, Boraie & Kassabgy, 1996), particularly when attention is paid to content of interest to learners (Grabe & Stoller, 1997). In learning, flow has been described as the highest state of intrinsic motivation, achieved only when a number of factors dynamically align (Ceja & Navarro, 2009). Due to its elusive and transitory nature, flow is difficult to maintain and cannot be expected to be a permanent state in class (Brophy, 2004). Rather, it is something that should be aspired toward through attention to learners' goals, interests, learning needs, and through giving learners control over activities (Egbert, 2003). Instructional materials which appealed to these factors resulted in the type of engagement, enjoyment, and lack of self-consciousness characteristic of peak learning flow experiences (Egbert, 2003). Instructional materials development or selection should take into account these various factors, and examine how they apply to

specific populations of learners in order to promote peak learning experiences in the language learning classroom.

Chapter 6

Conclusions and Implications

6.1 Conclusion

This study set out to formally assess the influence of instructional materials on FL learning motivation. More specifically, its goals were to evaluate how two distinct genres of English language learning instructional materials appealed to learners, to explain the reasons for such preferences, and to assess how the different materials affected learners' behaviour in the classroom. It was shown that learners preferred ESP materials overall due to their relevance and the characteristics of particular content and activities, and that these factors appeared to influence individual and group learning processes in the classroom. It was also demonstrated that, while a minority of learners preferred EFL materials, that these also had specific content and activity characteristics that contributed to their motivational appeal. These findings demonstrate that learning motivation can be influenced by the instructional materials used in FL learning classrooms, and that they therefore may be a variable that teachers can augment in order to encourage classroom engagement.

Due to the varying factors that comprise any given teaching situation or context, assessing learners' motivational response to instructional materials is a challenging endeavour. One means to address this challenge is through examining target learning populations within their specific learning contexts. As the classroom-based study presented in this paper has demonstrated, a mixed-method experimental design has particular utility in drawing data of sufficient breadth and depth to illuminate learners' motivational responses to instructional materials in specific classroom contexts. Others looking to conduct similar research are advised to adopt and integrate other methodological approaches and create mixed-methods designs according to the characteristics of their particular context and the learners therein. By doing so, research into motivational and instructional design can be expanded to further examine and meet the needs of specific populations of language learners. While classroom-based experimental research such as that presented here does have its limitations, it also

presents a number of valuable implications for educational practice and research. These implications will be discussed in Sections 6.3 and 6.4.

Instructional materials development and selection is one of the more persistent challenges confronting foreign language instructors and programs. In the face of this task, schools or teachers tend to rely on their own preliminary informal evaluations of student needs and interests (Tomlinson, 2008). A result of this process is instructional materials that do not necessarily appeal to learners; an outcome that is not surprising considering learners' limited role in the materials selection process (Littlejohn, 2011; Tomlinson, 2008). Due to the central role instructional materials play in FL learning classrooms, more attentions needs to be paid to what materials actually appeal to learners, and why in fact they do so. Chomsky (1988) posited that in foreign language instruction "99 percent of teaching is making students feel interested in the material" (p. 181). If FL teachers could spend less time convincing learners of how interesting instructional materials are, and more time attending to their collective and individual needs, the quality and outcome of instruction would likely benefit.

6.2 Limitations

Despite the number of important findings this study produced, it is necessary to address its limitations and how these might be mitigated in future research. While this study's sample size conformed to reliability standards for this type of experimental classroom study (Lewin, 2005), a larger sample could have provided other, and perhaps more valuable, insights into Japanese engineering students' motivational orientations toward different genres of instructional materials. A cross-institutional study would have been particularly valuable in evaluating how learners in schools with different institutional norms would respond to the same or similar sets of instructional materials. The variation in data collected across different engineering classes in the same university suggests that, if such differences do exist across individual classes, they may also exist across institutional settings. This possibility suggests that wider and more expansive studies may be necessary to substantiate and expand upon the findings presented here.

Another limitation is the nature of the individual data collection methods comprising the mixed-method approach used in this study. The instruments used in the study were chosen according to their perceived utility and practicality in examining

learners' motivational orientations towards different genres of materials within a fifteen week instructional term. However, it is possible that other administration patterns and instruments might have yielded similar, or even more insightful, results. Interviews, for example, could have been conducted on multiple occasions in order to gain a deeper understanding of the various influences on motivation over time (Mackey & Gass, 2005). Observations recorded through post-class note-taking are an efficient and unobtrusive means for obtaining authentic classroom data, but are limited by the instructor-acting-as-participant-observer's recall after class, and by a field of vision that is limited due to multitasking during instruction (Jones & Somekh, 2005). Other means of observation, particularly video, might be a better method to capture participants behaviour that could be more closely and repeatedly analysed (Gass & Mackey, 2008). Additionally, other data collection instruments could have been integrated into the mixed-method design that could have potentially enhanced the results. Examples include learner diaries or extended case studies to ascertain deeper and more focused longitudinal data, or think-aloud protocols to gauge learners' reactions to specific materials and activities in real time. While these techniques were not chosen for use in this study for a variety of reasons ranging from their practicality to their obtrusiveness, they certainly represent potential avenues for others looking to gauge the motivational impact of instructional materials on language learners.

An important final limitation that must be noted is the generalizability of the findings in this study. This being a classroom-based study, its results may be limited to the sample of students who participated. While a number of insights were gleaned into how different genres of materials can affect learner motivation in the sample studied, further corroborative research is necessary to see if these findings extend to other national and institutional settings. For such future inquiry, the findings presented here represent possible theoretical and methodological directions for related research in other settings or contexts.

6.3 Teaching Implications

The findings presented in this study have a number of important teaching implications. As these implications are closely tied to the objectives laid out in the research questions used to guide this study, they will be framed and discussed as they relate to these goals. More specifically, each research question will be discussed in turn regarding their insights into learner characteristics and preferences, and how these might

inform instructional materials selection or development in order to better facilitate motivational engagement in the target population of FL learners.

6.3.1 Implications of Overall Instructional Material Preferences

The first research question posed in this study was: Do learners have a particular preference toward EFL or ESP instructional materials? Data collected across questionnaires, interviews, and observations indicated that overall learners preferred the ESP materials. While this preference was consistently observed overall, there was also a minority of individual learners who preferred the EFL materials. The preferences expressed by learners indicated that broad genre preferences exist within this sample. While the reasons for these preferences will be discussed below in reference to Research Question 2, this initial general finding has both broad and specific implications for teachers.

The main overall implication is that teachers need to recognize the fact that learners do have instructional material preferences, and that these preferences appear to affect motivational engagement. In recognition of this fact, careful consideration should be given to the selection of materials to ensure they fit learners' interests and needs. While the most common means of assessing materials' suitability is generally informal or impressionistic (Littlejohn, 2011; Tomlinson, 2008), a more formal needs and interest analysis of learners would be a more valid and reliable approach. This kind of approach is widely used in ESP materials development and selection (Dudley-Evans & St John, 1998; Flowerdew, 2013; Songhori, 2008). A second option would be formal post-administration evaluation of particular instructional materials in order to ascertain students' direct impressions and responses (Ellis, 2011; Littlejohn, 2011). This was the approach utilized in this particular study. Post-administration evaluation is advantageous in that it permits learners to actually use and experience how particular content and activities bode with their interests and individual learning preferences. Where learners may not generally be disposed to particular content or types of learning materials, the sum of the elements of a particular set of materials may be enough to provide appeal despite other stated preferences. Such a situation was observed in the present study where students expressed a general dislike for difficult learning materials, but overall still liked difficult ESP materials due to the interest and utility value they represented. These findings are important as materials that might otherwise be disregarded due to preliminary evaluation schemes might ultimately be revealed to be

valuable to learners in actual use on the basis of the sum of their parts. In this regard, evaluation subsequent to instructional materials piloting or testing appears the best method to gain insight into the actual motivational appeal of a given set of materials.

A more specific teaching implication of the results garnered in this study involves the particular characteristics of the sample group examined. The sample included Japanese tertiary students majoring in aerospace technology and mechanical engineering. Japanese engineering students, and more broadly other Japanese tertiary learners majoring in non-English related majors, have been observed to be demotivated in foreign language learning due to the academic demands in their own major studies, the mandatory nature of language education, and a general disinterest in the subject (Jacques, 2001; Koga, 2010; Kuwabara, Nakanishi, & Koma, 2005). For these learners, ESP instructional materials appear to represent a means for increasing relevance and interest in foreign language instruction. While the results of this study are not necessarily transferable across settings or contexts, its findings provide teachers with direction toward what types of materials they may want to pilot as a means to increase FL learning motivation. In particular, ESP materials appear a good starting point for materials selection for non-English majors such as engineering students due to their potential interest and relevance.

For teachers looking to adapt or develop ESP materials to motivate particular groups of learners, it is necessary to consider their structure, particularly in regard to specialty content and proficiency level. Dudley-Evans and St. John (1998) explain that ESP materials exist on a continuum ranging from general English for beginners; to advanced skills courses; to courses based on common skills that are thematically related to specific disciplines; to courses for broad disciplinary areas (such as report writing for scientists and engineers, medical English, etc.), to ancillary support for academic specialist courses or individual training for particular vocations. Selection of instructional materials for ESP students should thus be dictated by both learner proficiency as well as career/vocational needs (Gatehouse, 2001). This scale indicates that learners require a threshold level of basic functional language skills before they should proceed into ESP materials, and thematic lessons related to specialisms should be used to transition learners toward pure ESP materials. The lessons used in the ESP component of this study were based on a pre-intermediate level technical English text, and appeared to fit this intermediary position well; providing both specialized vocabulary and language practice for engineering, and appropriately linguistically-graded language instruction that enabled learners to reinforce and expand

their English skills at their particular proficiency level. The appropriateness of proficiency level and content of this particular set of materials for this sample of learners likely contributed to their positive endorsement. More advanced students' ESP skills would likely benefit from more challenging specialized tasks in their select area of speciality, while lower-level students would be best advised to develop broad basic English language skills before challenging ESP content (Dudley-Evans & St. John, 1998).

6.3.2 Characteristics of Instructional Materials and Their Implications

In examining reasons behind learners' preferences for particular types of instructional materials, the second research question provides a number of important implications for teachers. The second research question was: How do learners respond to the different qualities and characteristics of EFL and ESP materials? The first significant finding garnered from the IMMS data was the difference in perceptions regarding the relevance of the two sets of materials. Relevance was demonstrated to be a complex variable comprised of a number of factors such as prospective utility, teaching and learning style congruence, and fit between content and personal interests (Keller, 2010).

Prospective utility was demonstrated to be tied to learner goals; particularly the role English plays in helping learners reach their career or academic goals. Due to the connection between learner goals and motivational level (Dörnyei, 2001), teachers should be aware of the wide variety and range of possible goals that drive learners (Boekaerts, 1998; Brophy, 2004; Ford, 1992; Linnenbrink & Pintrich, 2001). Through knowledge of such potential goals instructors will be better equipped to facilitate goal setting in the classroom; according to Brophy (2004), "doing so successfully involves making it possible for students to coordinate their goals so that many different goals are being satisfied, and few if any are being frustrated, and they engage in classroom activities with motivation to learn" (pp. 8-9).

The teaching implications of multiple goals in the language learning classroom can be examined using Dörnyei and Otto's (1998) theoretical framework. According to the authors, goals have a number of properties which influence their degree of impact on behaviour, including their specificity, proximity, harmony or conflict, and relative level of aspiration. Incorporation of these characteristics into instructional materials

development and instruction can encourage more motivated goal-directed language learning behaviour. As vague goals result in comparatively lower levels of motivated behaviour (Ames, 1992; Locke & Latham, 1990), promoting specific goals would be beneficial. In language learning instructional materials this would take the form of activities and tasks that specifically ask students to set immediate or future goals, and to actively contemplate the connection between how the presented skills might be used in future careers, academic endeavours, or international activities. The proximity of goals is also an important factor. Proximal, or more immediate, goals tend to have a stronger impact on behaviour (Ames, 1992). However, the results of this study indicated that many of the participants were also strongly affected by more distal career-oriented goals. With this in mind, it would be advisable that instructional materials direct learners to set both immediate goals, such as using and mastering skills for completing immediate tasks and activities in the classroom and in their daily lives, but also contain content that learners see as relevant to their longer-term personal and professional goals. Dörnyei and Otto (1998) also stress that teachers need to be aware that learners' multiple goals should be harmonious and not be in conflict. Instructional materials should encourage learners to prioritize what they want to accomplish and set complimentary rather than conflicting goals. An example would be rather than having students orienting themselves towards English for travel abroad versus English for careers, finding common ground where these can be presented as complementary goals rather than mutually exclusive. In orienting instructional materials in such a way learners can have multiple goals, and more reasons to be engaged in language learning. The fourth characteristic of goals is their level of aspiration. While it is good for students to be ambitious, unrealistic goals that are difficult to achieve require students to prolong gratification. Therefore, instructional materials should provide the opportunity for learners to fulfil a series of proximal goals that encourage learners as they proceed towards larger and more distant goals (Bandura, 1997; Boekaerts, Pintrich & Zeidner, 1997). Combined, these areas provide guidance for teachers in choosing and developing materials that promote the utility-value of instructional materials through the promotion of goal-directed learning.

Another area that has direct instructional implications is learners' preferred learning and teaching styles. Learning or cognitive styles have been demonstrated to be an important individual difference in language learners (Ehrman, 1996a; Ehrman & Leaver, 2003; Ehrman, Leaver & Oxford, 2003; Wong & Nunan, 2011). However, due to the expansive number of possible learning styles affecting learners it is somewhat difficult for teachers to assess and appeal to every possible style for each individual

learner (H.D. Brown, 1994). A more pragmatic approach is to address learning style needs collectively in groups of learners according to their shared cultural or academic characteristics (Ehrman, 1996b; Oxford & Anderson, 1995). Oxford and Anderson (1995) in particular have stressed that teachers need to be aware of the role culture plays in influencing learning styles, and the importance of finding ways to recognize and account for such styles in classroom instruction. While this is generally good advice for teachers, it can also be somewhat problematic as studies examining the learning styles of Japanese learners have produced somewhat mixed results, particularly in regard to areas such as group orientation and field-independence (Ramburuth & McCormick, 2001; Reid, 1987; Wintergert, DeCapua, & Verna, 2003). While group characteristics do exist, it is important that teachers are aware of possible variability across particular classes or groups within the same culture.

The results of this particular study did reveal some overall preferences in regard to learning styles, with learners demonstrating a strong kinaesthetic and tactile learning orientation, as well as a preference for active over passive learning. In order to appeal to these preferences, instructional materials should include activities that connect the TL to language learning activities that have a physical or tactile component. An example of this type of activity was included in Lesson 8, which required learners to measure dimensions of objects in the classroom. This activity resulted in extremely high engagement, perhaps even a state of "flow" in learners (Csikszentmihalyi, 1991, 1997). This type of engagement was also evident in more conceptual design activities that required learners to design and describe a simple house, and to use gestures to simulate the functions of a control stick in operating a gyrocopter. English language learning materials for Japanese engineering students should strive to contain these types of kinaesthetic and tactile elements, encouraging users to use gestures and movement to express ideas connected to the target language. While it may be unrealistic for all activities contain these features (Brophy, 2004), their inclusion in instructional materials should be considered good practice as they appear to encourage engagement and represent a high point in lessons for students.

Both classes also demonstrated a preference for active over passive learning. Interviews revealed that passive learning appeared to be a characteristic of prior negative language learning experiences, particularly in preparation for university entrance exams. This preference also aligned with learners' stated teaching preferences, with students voicing a dislike for the more passive traditional grammar translation methodologies used in test preparation classes. Where possible, instructional materials

should strive to not only positively endorse learning style and instructional preferences, but also avoid styles and approaches that might contribute to the formation of affective barriers (Krashen, 1982). With these past experiences and preferences in mind, instructional materials for these learners should strive to promote active learning through providing learners with opportunities to interact and use the target language actively with their classmates. A more communicative approach would be more fitting in this regard, and would likely fit learners' expectations of what should be transpiring in the English language learning classroom (Yoshida et al., 2012). Teachers also need to monitor and note if particular activities and approaches are negatively associated with English language learning, and choose or develop instructional materials accordingly (Ellis, 2011; Masuhara, 2011).

Additionally, further specific implications for teachers can be derived from observed differences in learning styles across classes. One specific difference between the two classes was their attitudes towards openness in learning activities. The mechanical engineering class appeared to be much more oriented toward closed activities, while the aerospace engineering readily engaged open activities. While both types of activities are likely to comprise any given set of instructional materials, a balance of open and closed activity types would likely appeal most broadly to learners. However, learners more inclined toward closed activities do need to be provided with guidance in regard to how to engage more open and cooperative interaction as this plays a central role in learning and actually using a foreign language (Savignon, 1991; Widdowson, 1998). This can be achieved through materials that gradually transition students into engaging more open-ended types of activities.

Group learning orientation was another distinct learning style difference observed across classes, with the first class demonstrating weaker group-orientation than the second class. Due to the demonstrated positive connection between group learning and language acquisition (Clement, Dörnyei, & Noels, 1994; Dörnyei & Malderaz, 1997), learners should be encouraged to embrace group learning styles as a means to enhance language learning outcomes. One way to encourage learners to adopt a group learning style orientation is to provide them with positive group learning experiences. This can be achieved through the promotion of positive interdependence in the classroom; that is promoting in learners the view that learning success is a shared product of cooperation with classmates (Dörnyei, 1997). Dörnyei suggests a number of instructional interventions, including structuring goals, rewards, student roles and rules in the classroom to better facilitate group learning and positive group dynamics. While

instructional materials should be reflective of these elements, he also specifically suggests that they be structured to include activities and tasks that promote cooperative completion. An example of this type of activity within the current study was the machine specification activity used in Lesson 2, where learners were required to collect information from their classmates to complete the item profiles. While this was a relatively simple information gap activity, it was well received by all students on multiple levels; being highly engaged by both those who approached it as an instrumental task, and those who appeared to derive more intrinsic enjoyment from interacting, talking about the machines, and completing the task with their classmates. Despite the different motivational orientations of students, their coming together to complete the task resulted in a high level of class engagement and an overall positive classroom dynamic. These shared experiences are important in developing learners' relationships, their sense of security, and expectations of one another (Prahbu, 1992). In short, these are the first steps in creating the group norms that promote and encourage learners to embrace group learning styles that are conducive to group learning. While a number of students in the first class failed to work well together in small groups or pairs, they appeared drawn into more positive group learning behaviours through the dynamics of large group activities. The differing group dynamics and norms generated by the different content, activities and tasks within the materials speaks to the importance of variety as means for instructors to observe learners' varying reactions to curricular stimuli. Where possible, materials content and activities that promote positive group interaction need to be used as an initial means for establishing positive group norms and learning behaviours (Prahbu, 1992).

A third reason learners appeared to prefer particular instructional material types was the content and the interest factor they represented. Learners in this particular sample demonstrated a keen interest in materials and activities that contained engineering themes. Attraction to this type of content is perhaps unsurprising considering how it aligns with both personal interests and the learners' field of study in university. For learners who may not have intrinsic interest in learning a foreign language, particularly those who study a foreign language as a general education degree requirement such as the engineering students in this study, content and interest provide a possible direction to positively influence attitudes and behaviours. Orienting instructional materials towards interests could begin with a formal analysis of learners' interests, or more practically with selected themes related to tertiary students' majors as this would presumably represent an area which holds both personal and academic interest and relevance. Particularly in Japan, where the value of the ubiquitous general

EFL conversational texts used across the nation have been called into question (Rebuck, 2006; Smiley & Masui, 2008), materials directed towards learners' real needs and interests provide a worthwhile direction for student-centred curriculum content.

6.3.3 Instructional Materials and Learner Behaviour

The third research question sought to evaluate how the different genres of instructional materials affected learners' behaviour in the classroom. The question was phrased: In what ways do instructional material preferences manifest in learner behaviour across EFL and ESP genres? For instructors, this question has particular relevance as it provides insight into how different materials can affect language learning behaviours. The most readily observed overall difference in learner behaviour across the two genres was the degree of engagement they evoked. Learners appeared most highly and consistently engaged when using the ESP materials. A number of behaviours accompanied this engagement including a greater willingness to communicate and interact with classmates individually and in groups, and a greater demonstrated resolve to challenge difficult materials. These factors reflect the findings of Cao & Philips (2006) and suggest that instructional material content can positively influence the learner in multiple ways. If teachers want their learners to demonstrate positive learning behaviours in the classroom, it is essential that they monitor and encourage factors that promote such behaviours. The results presented here suggest that evaluating learning behaviour in response to specific instructional materials may help inform curricular choices in order to improve motivated learning behaviours.

6.4 Research Implications

Motivation has been demonstrated to be a complex phenomenon. Due to the number of variables that comprise motivation it has traditionally been a challenging construct to measure in learners (Weiner, 1984). Not only is motivation an affective phenomenon, influencing all of the feelings and emotions that comprise the individual learners' affective states (Arnold & Brown, 1999; Gardner & MacIntyre, 1993), it is also tied to complex cognitive functions affecting their beliefs and approaches to learning (Gardner & MacIntyre, 1992). The various factors simultaneously affecting learner motivation has been described by Dörnyei (2001) in terms of "parallel multiplicity" (pp.13-14). Dörnyei (2001) explains:

> Although it is true that people pursue only a limited number of actions at a time, various action episodes can be simultaneously active. For example, a new action may be initiated while the success of the previous action is still being evaluated. This is particularly valid for classroom contexts where student motivation and achievement are the product of a complex set of interacting goals and intentions. Therefore, a central issue in analysing student motivation (and motivation in general) is to account for the interplay of the learners' "simultaneous focus" on a number of different but yet interacting goals and activities. (p. 13)

For the reasons cited above, describing the various factors simultaneously affecting learners' motivation is challenging, and has prompted language learning researchers to increasingly expand their methodological approaches (e.g., Barker, 2005; Dörnyei, 2001; Hotho & Reiman, 1998; Spolsky, 2000).

The inherent complexity of learners' motivational orientations toward instructional materials was readily observable in the results of this study which demonstrated a number of factors simultaneously affecting learner engagement. Such factors included perceived relevance, content and interest, proximal and distal goal congruence, individual and group characteristics, and the specific qualities of activities and tasks comprising any given set of instructional materials. The mixed-method approach utilized in this study proved to be useful in deriving varied perspectives within the sample examined. The IMMS produced important insights into major motivational variables, the post-class questionnaire complemented these findings providing longitudinal perspectives on attitudinal fluctuations across weeks, the interviews provided thick explanatory insight into why learners reacted to specific materials in different ways, and finally, the instructor's post-class field notes garnered from in-class observations provided an overview of how the various factors appeared to manifest in observable learning behaviours. Combined, these findings speak to the value of mixed-method experimental approaches in measuring FL learning motivation in the classroom. While a single questionnaire can provide reliable data on specific variables, they ultimately do not sufficiently depict the complexities underlying individual learners (Mackey & Gass, 2005). Thus, combining positivist approaches with more interpretive methods serves to effectively examine not only the state of motivation in learners, but also adds insight into how and why these attitudes are formed and revealed. Due to this utility, mixed methods represent an important future avenue for language learning motivational research (Dörnyei, 2001; Dörnyei & Ushioda, 2011).

Another important research implication arising from the approach used in this study was its value in providing voice to the participants. A mixed-method study which includes naturalistic classroom inquiry is helpful in contributing to, what Mackey and Gass (2008) describe as, the 'ecological validity' of research by firmly grounding it in the classroom environment. Inclusion of classroom and learner perspectives increases the opportunity for learners' voices to be heard. This is a specific goal of the dialectical theoretical position (Greene & Caracelli, 1997) from which this study was carried out. In the present study students were made cognizant of the various data collection instruments being used to measure their impressions of the materials used in class, and that their reaction to, and opinions of, the materials used would be a factor in future materials selection and curriculum development. Involving participants in this manner increases students' stake in the study and research process, and in doing so provides impetus for them to look at materials critically. It is hoped that fostering this position in student-participants encouraged them to approach the materials and activities used in this study with more import than the usual "daily grind" activities encountered in the classroom (Brophy, 2004), and that they came away from the experience with the satisfaction that their voices would be represented in future curricular decisions.

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Appendix 1: IMMS (Japanese Version)

IMMS

教材モチベーションアンケート page.1

各項目についてあなたの気持ちにあてはまる番号ひとつに〇をして下さい。

1. 全くそう思わない 2.あまりそう思わない 3.どちらでもない 4.だいたいそう思う 5.とてもそう思う

Statement	Degree of agreement				
1. この教材を見たとき、簡単そうな印象を持った。	1	2	3	4	5
2. この教材は私の興味を引くおもしろそうなものが最初の所にあった。	1	2	3	4	5
3. この教材は私が期待していたものより難しかった。	1	2	3	4	5
4. 導入部分を読んだ後、この教材から何を学ぶべきか理解できた。	1	2	3	4	5
5. この教材のエクササイズを終えることで、達成感を得た。	1	2	3	4	5
6. この教材の内容と私の持っている知識は関連している。	1	2	3	4	5
7. この教材の多くのページは情報がありすぎて、大切な部分を選んで覚えるのに苦労した。	1	2	3	4	5
8. この教材は目を引く。	1	2	3	4	5
9. この教材の内容は重要である。	1	2	3	4	5
10. この教材をきちんと終了するのは大切である。	1	2	3	4	5
11. この教材のクオリティーは興味を保つのに役立った。	1	2	3	4	5
12. この教材は抽象的すぎて、興味を保つのが困難だった。	1	2	3	4	5
13. この教材を使っているなかで、内容を学習できる自信があった。	1	2	3	4	5
14. この教材がおもしろかったので、もっと英語を勉強してみようと思った。	1	2	3	4	5
15. この教材のデザインが無味乾燥で、魅力的でなかった。	1	2	3	4	5
16. この教材の内容が私の興味に合っていた。	1	2	3	4	5
17. この教材の情報のアレンジの仕方が私の集中力を保つのに役立った。	1	2	3	4	5
18. この教材には、新しく学習したことの使い方の説明や例があった。	1	2	3	4	5
19. この教材のエクササイズは難しすぎた。	1	2	3	4	5
20. この教材には好奇心を刺激するものがあった。	1	2	3	4	5
21. この教材を楽しんで学習した。	1	2	3	4	5
22. この教材は繰り返しの部分が多くて、時々つまらなくなった。	1	2	3	4	5
23. この教材の内容やスタイルから、学習する価値があると思った。	1	2	3	4	5

Appendix 1 Continued: IMMS (Japanese Version)

IMMS

page.2

教材モチベーションアンケート

page.2

各項目についてあなたの気持ちにあてはまる番号ひとつに〇をして下さい。

1. 全くそう思わない 2.あまりそう思わない 3.どちらでもない 4.だいたいそう思う 5.とてもそう思う

24. この教材から学んだものの中には、驚いたことや、意外だったものもあった。	1	2	3	4	5
25. この教材をしばらく学習してみて、この教材についてのテストに合格する自信がある。	1	2	3	4	5
26. この教材の内容は、すでにほとんど知っていたので、私のニーズには合わなかった。	1	2	3	4	5
27. 教材のエクササイズを終えた後で採点やコメントを返してもらうと努力が報われた気持ちになる。	1	2	3	4	5
28. さまざまなリーディングパッセージ、エクササイズ、イラストなどが集中力を維持する助けになった。	1	2	3	4	5
29. この教材のスタイルはつまらない。	1	2	3	4	5
30. この教材の内容と、私自身が今まで見たこと、したこと、思ったことを関連付けることができた。	1	2	3	4	5
31. この教材は各ページに新しい単語がありすぎて、イライラする。	1	2	3	4	5
32. この教材をやり終えて、気分が良かった。	1	2	3	4	5
33. この教材の内容は、私にとって有益だ。	1	2	3	4	5
34. この教材の内容の大部分は、あまり理解できなかった。	1	2	3	4	5
35. この教材の内容構成が良かったので、学べるという自信につながった。	1	2	3	4	5
36. この教材で学習するのは楽しかった。	1	2	3	4	5

Appendix 2: IMMS (English Version)

Instructional Materials Motivational Survey page.1

Circle your degree of agreement with the statements below.

1. Not true 2. Slightly true 3. Moderately true 4. Mostly true 5. Very true

Statement	Degree of agreement				
1. When I looked at the materials, I had the impression that it would be easy for me.	1	2	3	4	5
2. There was something interesting at the beginning of the materials that got my attention	1	2	3	4	5
3. The materials were more difficult than I would like them to be.	1	2	3	4	5
4. After doing the introductory activity, I felt confident that I knew what I was supposed to learn from the material.	1	2	3	4	5
5. Completing the exercises in the EFL materials gave me a satisfying feeling of accomplishment.。	1	2	3	4	5
6. It is clear to me how the content of the materials is related to things I already know.	1	2	3	4	5
7. Many of the pages had so much information that it was hard to pick out and remember the important parts.	1	2	3	4	5
8. The materials are eye-catching.	1	2	3	4	5
9. There were examples that showed me how the material could be important to some people.	1	2	3	4	5
10. Completing the materials successfully was important to me.	1	2	3	4	5
11. The quality of the writing helped hold my attention.	1	2	3	4	5
12. The materials are so abstract that it was hard to keep my attention on it.	1	2	3	4	5
13. As I worked on the materials, I was confident I could learn the content.	1	2	3	4	5
14. I enjoyed the material so much that I would like to know more about this topic.	1	2	3	4	5
15. The design of the materials looks dry and unappealing.	1	2	3	4	5
16. The content of the materials is relevant to my interests.	1	2	3	4	5
17. The way the information is arranged in the materials helped keep my attention.	1	2	3	4	5
18. There are explanations or examples of how to use the knowledge in the materials.	1	2	3	4	5

Appendix 2 Continued: IMMS (English Version)

Instructional Materials Motivational Survey page.2

Circle your degree of agreement with the statements below.

1. Not true 2. Slightly true 3. Moderately true 4. Mostly true 5. Very true

19. The exercises in the materials were too difficult.	1	2	3	4	5
20. The materials have things that stimulate my curiosity.。	1	2	3	4	5
21. I really enjoyed studying the materials.	1	2	3	4	5
22. The amount of repetition in the EFL materials caused me to get bored sometimes.	1	2	3	4	5
23. The content and style of writing in the materials convey the impression that its content is worth knowing.。	1	2	3	4	5
24. I learned some things that were surprising or unexpected..	1	2	3	4	5
25. After working on the materials for a while, I feel confident that I would be able to pass a test on their content.	1	2	3	4	5
26. The materials were not relevant to my needs because I already knew most of it.	1	2	3	4	5
27. The working of feedback after the exercises, or of other comments in the materials, helped me feel rewarded for my effort.	1	2	3	4	5
28. The variety of reading passages, exercises, illustrations, etc., helped keep my attention on the tutorial.	1	2	3	4	5
29. The style of writing is boring.	1	2	3	4	5
30. I could relate the content of the materials to things I have seen, done or thought about my own life.	1	2	3	4	5
31. There are so many words on each page that it is irritating.。	1	2	3	4	5
32. It felt good to successfully complete the materials.	1	2	3	4	5
33. The content of the materials will be useful to me.。	1	2	3	4	5
34. I could not really understand quite a bit of the material.	1	2	3	4	5
35. The good organization of the content helped me be confident that I would learn this material.	1	2	3	4	5
36. It was a pleasure to work on such well-designed materials.	1	2	3	4	5

Appendix 3: Self-Report Questionnaire (Japanese Version)

今日のクラスで使用した教材についてあなたの印象をお聞きします。
各スケールは反対の意味を持つ形容詞が両端に置かれ、7 段階に分割されています。
あなたが持った印象に一番近いと思われるところに X マークを書いて下さい。

例） とても興味深いと感じた場合。
興味深い：_X_：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：つまらない
とてもつまらないと感じた場合。
興味深い：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：_X_：つまらない
いくぶん興味深いと感じた場合。
興味深い：＿＿：_X_：＿＿：＿＿：＿＿：＿＿：＿＿：つまらない
いくぶんつまらないと感じた場合。
興味深い：＿＿：＿＿：＿＿：＿＿：＿＿：_X_：＿＿：つまらない
わずかに興味深いと感じた場合。
興味深い：＿＿：＿＿：_X_：＿＿：＿＿：＿＿：＿＿：つまらない
わずかにつまらないと感じた場合。
興味深い：＿＿：＿＿：＿＿：＿＿：_X_：＿＿：＿＿：つまらない
どちらにも当てはまらない場合はスケールの真ん中に X を書いて下さい。
興味深い：＿＿：＿＿：＿＿：_X_：＿＿：＿＿：＿＿：つまらない

重要：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：重要でない
満足でない：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：満足
難しい：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：簡単
興味深い：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：つまらない
やりがいのない：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：やりがいのある
楽な：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：つらい
役に立つ：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：役に立たない
魅力的でない：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：魅力的な
必要：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：不必要
価値のない：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：価値のある
良い：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：悪い
単調：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：面白い
楽しい：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：楽しくない
意味のない：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：意味のある
好ましい：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：＿＿：不快な

Appendix 4: Self-Report Questionnaire (English Translation)

Directions

The following scales aim at finding out your impressions of the instructional materials used in today's class. Each scale has two opposite adjectives divided by a seven point scale.

If the word at either end of the scale strongly describes your impression of the class materials you would place an X as follows:

interesting :__X__:_____:_____:_____:_____:_____:_____: boring
interesting :_____:_____:_____:_____:_____:_____:__X__: boring

If the word at either end of the scale describes somewhat your impression of the class materials you would place an X as follows:

interesting :_____:__X__:_____:_____:_____:_____:_____: boring
interesting :_____:_____:_____:_____:_____:_____:__X__: boring

If the word at either end of the scale slightly describes your impression of the class materials you would place an X as follows:

interesting :_____:__X__:_____:_____:_____:_____:_____: boring
interesting :_____:_____:_____:_____:_____:_____:__X__: boring

If the word at either end of the scale doesn't seem to be at all related to your impression of the class materials you would place an X in the middle of the scale as follows:

interesting :_____:_____:_____:__X__:_____:_____:_____: boring

There are no correct or incorrect answers in this questionnaire. Write your first impressions quickly, and do not take a long time to think about your answers. If you have any questions, please ask your teacher before beginning the questionnaire.

Appendix 4 (Continued)

Appendix 4: Self-Report Questionnaire (English Translation) continued

Self-Report Questionnaire: Today's Class Materials

important	:____:____:____:____:____:____:____:	not important
unsatisfying	:____:____:____:____:____:____:____:	satisfying
difficult	:____:____:____:____:____:____:____:	easy
interesting	:____:____:____:____:____:____:____:	boring
unrewarding	:____:____:____:____:____:____:____:	rewarding
pleasurable	:____:____:____:____:____:____:____:	painful
useful	:____:____:____:____:____:____:____:	useless
unappealing	:____:____:____:____:____:____:____:	appealing
necessary	:____:____:____:____:____:____:____:	unnecessary
worthless	:____:____:____:____:____:____:____:	valuable
good	:____:____:____:____:____:____:____:	bad
monotonous	:____:____:____:____:____:____:____:	absorbing
enjoyable	:____:____:____:____:____:____:____:	unenjoyable
meaningless	:____:____:____:____:____:____:____:	meaningful
agreeable	:____:____:____:____:____:____:____:	disagreeable

Appendix 5: Demographic Data of Interview Participants

Student 1: A nineteen year-old male majoring in mechanical engineering. He has studied English for 7 years.

Student 2: A twenty year-old male majoring in aerospace engineering. He has studied English for 9 years.

Student 3: A nineteen year-old male majoring in aerospace engineering. He has studied English for 7 years.

Student 4: A nineteen year-old male majoring in aerospace engineering. He has studied English for 7 years.

Student 5: A nineteen year-old male majoring in aerospace engineering. He has studied English for 8 years.

Student 6: A twenty year-old male majoring in mechanical engineering. He has studied English for 8 years.

Student 7: A twenty year-old male majoring in aerospace engineering. He has studied English for 8 years.

Student 8: A nineteen year-old male majoring in aerospace engineering. He has studied English for 9 years.

Student 9: A nineteen year-old male majoring in mechanical engineering. He has studied English for 7 years.

Student 10: A nineteen year-old male majoring in mechanical engineering. He has studied English for 7 years.

Appendix 6: Class Syllabus

英語コミュニケーション演習Ⅰ(English Communication I Syllabus)

授業科目名 Class Name	英語コミュ二ケーション演習Ⅰ　（A クラス）
単位数 Credits	2
担当教員 Instructor	ジョンソン　ポール　マイケル Michael Paul Johnson
教員室番号 Instructor's Office	Q511
連絡先(Tel)	46-5840
連絡先(E-mail)	murotech@gmail.com
オフィスアワー Office Hour	水曜日 4:00-5:00
授業のねらい Overall Class Objectives	This class aims to develop communicative competence and basic technical English skills through extensive practice in listening and speaking. Further aims of this class include development of sociolinguistic competence and intercultural communication skills. The prime objective is that students will improve their confidence in communicating in English, and in using technical English.
到達度目標 Class Outcome Goals	1. Establish confidence and competence in communicating in both basic English and technical English. 2. To gain practical experience using English appropriately in a variety of situations. 3. To gain greater cultural competence in using English.
授業計画 Weekly Schedule	Weekly Schedule Week 1: Introductory Class

	Week 2: General English Communication 1: Lifestyles (Describing daily life and routine) Week 3: Technical Communication 1: Information (Numbers, technical symbols) Week 4: General English Communication 2: Interests (Talking about hobbies and interests) Week 5: Technical Communication 2: What's it like? (Describing objects, shapes etc.) Week 6: General English Communication 3: Food and drink (Talking about food preferences; using English to order food in restaurants) Week 7: Technical Communication 3: What's it made of? (Materials, physical characteristics) Week 8: General English Communication 4: Rules (Expressing obligations in daily life) Week 9: Technical Communication 4: Tell me about it. (Expressing dimensions) Week 10: General English Communication: Experiences (Talking about past experiences) Week 11: Technical Communication 5: Does it fit? (Describing how things work) Week 12: General English Communication 6: Comparisons (Expressing comparisons and preferences; comparing people) Week 13: Technical Communication 6: Can you fix it? (Explaining technical problems) Week 14: Review Week 15: Final exam
教科書 Required Textbooks	No textbook is required. Your teacher will bring materials to class.
参考書 Supplementary Texts	A dictionary would be helpful， but is not required.

成績評価方法 Assessment	課題 50%, 学期末試験が 50%100 点満点で評価。100 点満点中 60 点以上を合格とする。 Grades will be assessed on the following: Assignments 50%; Final exam 50%. A grade of 60% or over is required to receive credit for this class.
教員メッセージ Instructor’s Message	This is an English communication class so please come to class prepared to communicate and interact with your classmates and teacher.
学習・教育目標との対応 Educational and Learning Purposes	This class corresponds with broader educational goals at this university through providing foreign language training, exposing students to cross-cultural issues, and developing students’ critical thinking skills. (thus conforming to JABEE (Japan Accreditation Board for Engineering Education)(f) requirements. ＪＡＢＥＥ基準（ｆ）の達成に寄与する。
備考 Remarks	The study of English will benefit you in your future studies, research and career. Use this course as a means to develop a good English base from which you can draw upon in these future endeavours.

[Published Paper 1: Journal Article]

Examining EFL Motivation in Japanese Engineering Students.

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Examining EFL Motivation in Japanese Engineering Students

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Biodata

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Abstract

The purpose of this study was to construct a motivational profile for a specific subpopulation of non-English major EFL (English as a Foreign Language) learners, and to demonstrate how language learning motivational characteristics vary across cohorts of learners. In order to achieve these goals, a questionnaire was developed and administered to a sample of 320 engineering students at a university in northern Japan. The findings revealed an inconsistent motivational core in the sample which was characterized by a low intensity of motivated learning behavior despite positive

attitudes towards learning English, and a stated desire to learn the language. Inferential statistics revealed several variables correlating in both predictable and unpredictable ways, as well as significant variation between cohorts in a number of variables. Implications of these findings and their importance in addressing the specific motivational needs of subpopulations of EFL learners are discussed.

Keywords: motivation, self-efficacy, anxiety, English as a Foreign Language, engineering majors

1. Introduction

In recent years the importance of English education has expanded corresponding with its role as the global language for business and technology. This importance has been reflected in the ongoing promotion and expansion of English education across Asian nations. As English education has proliferated in Asia, the range of students studying the language has expanded commensurately. In tertiary education, this has resulted in English classes representing an increasingly important position in the studies of non-English majors such as those in engineering and computer science programs. In order to illustrate the specific learning needs of a subpopulation of EFL learners, this paper will describe a study examining the motivational characteristics of engineering students in a specific Asian context (Japan), and describe how EFL learning motivation differs across cohorts at different stages of their engineering programs. Educating non-English majors in EFL presents some unique challenges for educators, and requires language teachers to consider the specific needs and characteristics of such learners. In cross-major comparisons of tertiary students' TOEIC results, engineering students have been shown to have lower levels of proficiency, and

inconsistent year-on-year improvement compared to other majors (Institute for International Business Communication [IIBC], 2009). In the Japanese context, engineering students have also been demonstrated to have EFL learning needs (Kuwabara, Nakanishi & Komai, 2005), and motivational characteristics (Kimura, Nakata & Okumura, 2001) distinct from learners in other majors. It is hoped that this paper will expand upon our understanding of this population of EFL learners, and in doing so provide educators with insights that will help improve the English learning outcomes of Asia's future engineers.

2. Literature Review

In order to identify the motivational characteristics of a specific population of language learners it is necessary to draw upon the broad range of motivational variables identified in previous motivational research. Many of the studies conducted over the last several decades draw theoretical and methodological inspiration from the works of Robert Gardner and his associates (see Gardner & Lambert, 1972 for a summary of early studies). In these studies, Gardner and Lambert established the concepts of 'integrative' and 'instrumental' motivational orientations. The demonstrated importance of an integrative motive resulted in it becoming a central component of Gardner's (1985) socio-educational model of language learning. The motivational component of this model is a construct consisting of three parts: motivational intensity, desire to learn the language, and attitudes toward the language, all three of which Gardner considers essential characteristics of a motivated language learner.

Expanding beyond the social psychological approach developed by Gardner, a number of studies shifted to more eclectic approaches in order to better describe the

cognitive and affective bases for motivational behavior as well as to guide the development of practical classroom-based interventions (Crookes & Schmidt, 1991; Dornyei, 1994, 2001; Dornyei & Otto, 1998). Cognitive aspects of language learning motivation have been largely addressed by expectancy-value theories (Dornyei, 2001), specifically self-determination theory (Deci & Ryan, 1985), attribution theory (Weiner, 1986), and self-efficacy theories (Bandura, 1977). These concepts have been employed to explain cognition in language learning motivation in terms of intrinsic/extrinsic orientations (Brown, 1990; Noels, Clement & Pelletier, 1999; Noels, Pelletier, Clement & Vallerand, 2000), students' attributions for success and failure (Falout & Maruyama, 2004; Tremblay & Gardner, 1995), and the degree of confidence, or self-efficacy, a learner has in their ability to learn a new language (Hsieh & Schallert, 2008; Metallidou & Vlachou, 2007; Tremblay & Gardner, 1995). Affective aspects of language learning motivation research have concentrated on the influence of the role of anxiety on motivation. Particularly following publication of Horwitz, Horwitz and Cope's (1986) Foreign Classroom Language Anxiety Scale (FCLAS), the relationship between motivation and anxiety levels became a focus of a number of studies (Burden, 2004; Wei, 2007; Brown, Robson & Rosenkjar 2001).

Increasing attention on cognitive and affective aspects of motivation has also brought about a greater appreciation of the importance of how these, and other motivational variables, develop within the classroom environment, specifically in regard to class content (Crookes & Schmidt, 1991; Dornyei, 1994; Dornyei & Otto, 1998; Skehan, 1989) and teachers' behaviors (Chambers, 1993; Falout & Maruyama, 2004; Peacock, 1997; Sakai & Kikuchi, 2009; Wu, 2003). These findings reflect research in educational psychology which suggest that although learners' antecedent conditions (both cognitive and affective) do play a primary role in how they interpret

their classroom experience, that methodological, course design and teacher factors also play a significant role in motivating students within the classroom context (Goodboy & Bolkan, 2009; Gorham & Christophel, 1992; Gorham & Millette, 1997; Zhang, 2007).

The recent theoretical expansion of language learning motivation has accompanied a variety of broader social, and associated psychological, transformations which have forced researchers to reconsider the position of the learner within both motivational theory and the wider global community (Ushioda, 2006; Ushioda & Dornyei, 2009). Long-accepted motivational concepts such as integrative and instrumental orientations must now account for more globally-situated learners (Coetzee-VanRooy, 2006; Ushioda & Dornyei, 2009). A number of studies have provided evidence of an emerging global motivational orientation in language learners (Yashima, 2002; Lamb, 2004). Moving beyond the concept of motivation altogether, others have opted for a conception of investment over motivation as a means to better describe the social construction of language learner identity which takes place within the complex modern world (Norton, 1995).

Drawing upon the research above, this study set out to examine EFL motivation in a particular segment of learners by examining a broad range of established and emerging motivational variables. To derive a more comprehensive motivational profile of this group of learners, data was collected and analyzed as it applied not only to a broad sample, but also to different cohorts across various stages of their university programs. In order to guide this inquiry, the following research questions were developed:

1. What are the overall motivational characteristics of Japanese engineering students learning EFL?

2. What are the relationships between EFL learning motivational variables in this segment of learners?
3. Are there any differences between cohorts in terms of EFL learning motivational characteristics?

3. Method and materials

3.1 Participants

The participants in this study were all engineering majors (n = 320) at a national university in northern Japan. The participants' average age was 19.3 years, and indicated that they had been studying English from between 5 and 12 years, with the average duration of study being 7.39 years. A number of students indicated that they had taken standardized English tests in the past such as the TOEIC, EIKEN/STEP, and TOEFL tests. Of these, the TOEIC was the most popular, with a total of 17.7 percent of participants (n = 51) indicating that they had taken the test, with an average score of 361.3 points, and a range of 200 to 560. This represents a low beginner to intermediate proficiency range within those who had taken the test, and is likely representative of the proficiency range of the group of learners. The gender distribution of participants was 93% (n = 267) male, and 7% (n = 20) female.

3.2 Instrument

A preliminary questionnaire was developed and piloted with a sample of Japanese engineering students (n = 30). Based on the results of the pilot study, the instrument was revised and reorganized to improve its inner reliability and better reflect motivational factors relevant to the target population. The revised questionnaire consisted of two sections. The first section collected general demographic information

including subjects' age, gender, year of university, years of English study, and scores on any standardized English tests taken. The second section was a motivational questionnaire consisting of 11 scales and 100 items. Item responses indicated strength of agreement on a 6-point Likert-scale.

The first three scales, Motivational Intensity (MI), Attitude Toward English Learning (ALE), and Desire to Learn English (DES), were adapted from Gardner, Yashima and Yoshizawa's (2005) Japanese version of the Attitude/Motivation Test Battery (AMTB). Combined, these scales aimed at measuring the motivational core of the learners. The alpha for these scales indicated acceptable levels of internal reliability (MI: a = 72, ALE: a = .89, and DES: a = .83. The fourth questionnaire scale, Confidence (CON), was designed to measure the degree of self-efficacy, or confidence, learners have towards learning English. This scale also showed good internal reliability with an alpha of .87. To measure student anxiety, three scales were adapted from Horwitz, Horwitz and Cope's (1986) FCLAS. These scales included Communication Apprehension (CAP), Test Anxiety (TAN), and Fear of Negative Evaluation (FEN). All three scales demonstrated acceptable alphas of .88, .87, and .77 respectively. The eighth and ninth scales, Evaluation of the English Course (ECE) and English Teacher Evaluation (ETE), assess the learning environment. These scales were adapted from the Japanese AMTB (Gardner, Yashima & Yoshizawa, 1995) and produced acceptable alphas of .88 and .75 respectively. The tenth and eleventh scales address Instrumental Orientation (INS) and International Orientation (IO). INS (a = .75) was taken from the Japanese language AMTB and describes the degree to which students want to use English for practical or utilitarian purposes, while IO (a = .86) was developed to examine the degree to which students want to use English for interacting with the international community through media, entertainment and

international friendships. The number of items in each scale and their respective Cronbach's alpha are summarized below in Table 1.

Table 1: Scale summary - Number of items and Cronbach's alpha

	MI	ALE	DES	CON	CAP	TAN	FEN	ETE	ECE	INS	IO
Number of items	9	10	10	8	11	11	10	9	10	4	8
Cronbach's alpha	.72	.89	.83	.87	.88	.87	.77	.86	.88	.75	.86

3.3 Data collection and analysis

The questionnaire was administered to students at a national engineering university in northern Japan at the beginning of the academic school year. Students were first given a brief explanation of the nature and purpose of the study, and were then provided with informed consent forms. A total of 320 students agreed to take part in the study, from which 287 complete questionnaires were retained for analysis (incomplete questionnaires were omitted). The sample consisted of students in their first (n = 111), second (n = 103), and third years of study (n = 73). The data from the completed questionnaires was coded and logged. It was then input into Predictive Analytics Software (PASW Statistics, version 18) for analysis.

4. Results

Descriptive statistics were calculated to examine both overall group, and individual cohort, characteristics (Table 2). The three scales assessing motivation demonstrated moderately positive and negative endorsements. In order of strength of response, ALE (Attitude Toward English Learning) received the highest endorsement with a mean of

4.05(SD = .83), followed by DES (Desire To Learn English) with a mean of 3.98 (SD = .72) and MI (Motivational Intensity) with a mean of 3.34 (SD = .64). The ranking of these three variables remained constant across years indicating that although students appear to have positive attitudes and desires towards learning English, the actual intensity of their language learning behavior lagged consistently behind the other two core motivational variables.

Table 2: Scale summary - Descriptive statistics

	Whole Scale (n=287)		Year1 (n=111)		Year 2 (n=103)		Year 3 (n=73)	
	mean	SD	mean	SD	mean	SD	mean	SD
1. MI	3.34	0.64	3.54	0.70	3.15	0.59	3.31	0.53
2. ALE	4.05	0.83	4.17	0.99	3.83	0.68	4.16	0.69
3. DES	3.98	0.72	4.12	0.82	3.76	0.62	4.08	0.61
4. CON	2.36	0.85	2.27	0.92	2.46	0.82	2.35	0.79
5. CAP	3.94	0.88	4.05	0.95	3.93	0.82	3.77	0.84
6. TAN	3.60	0.89	3.78	0.91	3.62	0.87	3.29	0.81
7. FEN	2.95	0.69	2.95	0.74	2.90	0.69	3.03	0.62
8. ETE	2.60	0.74	2.20	0.62	3.14	0.60	2.44	0.61
9. ECE	3.33	0.81	3.15	0.90	3.60	0.69	3.24	0.73
10. INS	4.43	0.85	4.47	1.03	4.39	0.72	4.44	0.72
11. IO	4.34	0.91	4.45	1.00	4.22	0.83	4.32	0.87

English learning self-efficacy received the lowest overall endorsement with CON (Confidence) receiving a mean response of 2.36 (SD = .85). Confidence was lowest in the Year 1 group with a mean response of 2.27 (SD = .92). Year 2 (m = 2.46; SD = .82) and Year 3 (m = 2.35; SD = .79) results were also negative, indicating a sustained low level of English learning self-efficacy across all cohorts.

Results of the anxiety scales indicated that the overall sample had moderate levels of communicative apprehension (CAP: m = 3.94; SD = .88) and test anxiety (TAN: m = 3.60; SD = .89). The overall mean for fear of negative evaluation (FEN) was 2.95 (SD = .69) indicating low learner confidence in the classroom. There was little variation in these results across the three cohorts.

Scales examining classroom factors received moderately low endorsements. Overall sample means of 2.60 (SD = .74) for ETE (English Teacher Evaluation) and 3.33 (SD = .81) for ECE (Evaluation of the English Course) indicated that learners retained negative impressions of their English teachers and the content of their English classes. The lowest mean score for these two variables were in the first year cohort (ETE: m = 2.20; ECE: m = 3.15), indicating that these sentiments are likely derived from pre-university English learning experiences.

The highest overall endorsements came from the scales measuring instrumental and international orientations (INS and IO respectively). INS received the highest overall endorsement with a mean of 4.43 (SD = .85), with instrumental motives for learning English the highest in first (m = 4.47; SD = 1.03) and third year (m = 4.44; SD = .72) students. IO had the second highest overall mean (m = 4.34; SD = .91).

The direction and significance of relationships between questionnaire scales was investigated using Pearson product-moment correlation coefficient. The results (Appendix A) indicated that the core motivational scales DES (Desire to Learn English) and ALE (Attitude Toward English Learning) were strongly positively correlated ($r = .88$; $p < .01$). However, MI (Motivational Intensity) did not correlate significantly with these two scales. ALE and DES also both correlated positively with FEN (Fear of Negative Evaluation, $r = .47$; $p < .01$), INS (Instrumental Orientation, r

= 46; $p < .01$), and IO (International Orientation, $r = .67$; $p < .01$), meaning that learners' who exhibited positive attitudes and desire toward learning English also exhibited higher levels of classroom confidence, instrumental motivation, and international orientation. MI (Motivational Intensity) only positively correlated with CON (Confidence, $r = .48$; $p < .01$), indicating that those exhibiting intensive English learning behaviors also had higher levels of confidence. ALE and DES also correlated negatively with the same scales, with ALE negatively correlating with CAP (Communication Apprehension, $r = -.33$; $p < .01$) and ETE (English Teacher Evaluation, $r = -.51$; $p < .01$), and DES with CAP at ($r = -.27$; $p < .01$) and ETE at ($r = -.47$; $p = .01$). These results indicate that lower levels of communication apprehension accompany these variables. However, despite learners' positive attitudes and desire to learn English they still possess negative evaluations of their English instructors. It was also revealed that MI negatively correlated with TAN (Test Anxiety, $r = -.26$; $p < .01$) and ECE ($r = -.26$; $p < .01$). This indicates that intensely motivated students exhibit lower levels of test anxiety despite evaluating the classroom learning environment negatively.

Additionally, CON (Confidence) was negatively correlated with TAN ($r = -.51$; $p < .01$) and ECE ($r = -.47$; $p < .01$). This indicates that students with higher confidence levels in English language learning demonstrated lower anxiety towards English tests. Further, that despite higher levels of self-efficacy, students still held negative evaluations of the English classroom environment.

The three anxiety scales also revealed several significant correlations. CAP (Communication Apprehension) negatively correlated with FEN ($r = -.75$; $p < .01$) and IO ($r = -.15$; $p < .05$), indicating that the learners with high communicative apprehension also had lower classroom confidence and a lower international

orientation. CAP was also negatively correlated with MI ($r = -.26$; $p < .01$) and CON ($r = -.51$; $p < .01$) indicating that students with higher levels of communication apprehension demonstrated lower levels of motivational intensity and self-efficacy in English learning. FEN showed positive correlation with IO ($r = .32$; $p < .01$) and negative correlations with ETE ($r = -.28$; $p < .01$) and INS ($r = -.134$; $p < .05$).

Other important relationships include a negative correlation between ETE (English Teacher Evaluation) and IO ($r = -.346$; $p < .01$), and a positive correlation between INS and IO ($r = .496$; $p < .01$). The former once again indicates that despite low endorsement of English teachers students nonetheless possess a strong international orientation. The later indicates that instrumental and international orientations are positively correlated.

In order to determine the statistical significance of the relationship between cohorts, a one-way between groups analysis of variance (ANOVA) was conducted (Appendix B). The results showed statistically significant differences at the $p < .05$ level in seven of the eleven questionnaire scales. The results for the first scale, MI, indicated that significant differences existed between Year 1 and Year 2, and Year 1 and Year 3, with motivational intensity dropping significantly from first to second year students, and then remaining significantly lower in Year 3 than Year 1.

The second scale, ALE (Attitude Toward English Learning), also showed significant differences between two sets of cohorts. The first difference was a drop in attitudes between Year 1 and Year 2. The second was a significant difference in attitudes between Year 2 and Year 3 groups. The same inverted V relationship was observed in the third core motivational scale, DES, which also exhibited a reduction in the intervening Year 2.

Two of the three anxiety scales adapted from the FCLAS exhibited significant differences across cohorts. CAP demonstrated significant differences between Year 1 and Year 3, with students' apprehension to communicate in English significantly lower in the third year group. TAN showed significant differences across two sets of years, with Year 3 students having significantly less test anxiety than students in Year 1 and Year 2.

Significant differences were further observed in the scales measuring motivational variables in the learning environment. Representing the most significant differences across cohorts, ETE demonstrated noteworthy differences across all three years examined. The first year cohort was characterized by a low evaluation of their English instructors, an evaluation which was lower than both other cohorts. The second year cohort endorsed their English instructor significantly higher than both Year 1 and Year 3 groups, while the third years' results were significantly lower than those of the second year, but higher than the first, resulting in an inverted V correlational relationship across the three cohorts.

5. Discussion

The purpose of this study was to obtain a motivational profile of Japanese engineering students studying EFL through the examination of a range of variables, their relationships, and how they manifest in different cohorts of learners within this population. The overall results indicate some notable inconsistencies at the motivational core of this group of learners. The sample demonstrated positive attitudes and desires towards learning English, but a lack of motivated learning behavior as indicated by the low endorsement of the motivational intensity scale. Similar results have been observed in other studies (Berwick & Ross, 1989; Brown

2004). One possible explanation for this is that engineering majors, while appreciating the value of English, simply do not have time to commit to the language due to the academic demands of their engineering programs. Another possible reason for a lack of intensity is students' low level of English learning self-efficacy. As people tend to avoid activities that they fear exceed their abilities (Bandura, 1977), it is certainly possible that the sample chose to not expend intensive effort on English due its perceived difficulty. The positive correlation between confidence and motivational intensity scales are consistent with this hypothesis.

The results of the classroom anxiety scales offer further possible explanatory insight into the lack of motivational intensity in the sample. Overall, the three scales indicated that the participants were apprehensive to speak in English, were anxious toward English tests, and possessed low levels of confidence in using the language in the classroom. Anxiety appears to operate in a facilitative, albeit extrinsic, capacity in terms of motivating students for entrance tests earlier in their academic careers, but its lingering effect appears to be largely debilitative (as seen in Hashimoto, 2002; Yamashiro, 2001; O'Donnell, 2003). The negative correlations between test anxiety and motivational intensity, as well as test anxiety and confidence, suggest that there may be a negative relationship between these variables, although further study would be required to test such an inference.

The participants largely evaluated the classroom environment negatively, as reflected in low endorsements of their English teachers and English courses. These results correspond with other Japan-based studies (Falout & Maryuma, 2004; Burden, 2002). Interestingly, in this study ETE correlated negatively with DES, ALE and IO. These results indicate that despite having negative impressions towards their English instructors, students still retained positive attitudes and desires toward English

learning, in addition to a strong international orientation. Similarly, motivational intensity was negatively correlated with English class content. These findings suggest possible independence between these variables. A similar relationship was described by Kimura, Nakata and Okumura (2001), where they observed learners, who despite having a low appraisal for their English instructors, still possessed a high regard for the L2 community and for the instrumental value of English.

The high endorsement of instrumental and international orientations provides possible insights into why students still value English despite their learning anxieties, lack of confidence, and low appraisals of teachers and their English classes. The scales INS and IO received the highest overall endorsements, suggesting that students perceive English as having value for their future careers, and for interacting with the wider international community. The utilitarian value of English for Japanese learners is something that has emerged in other studies, with students' gaining instrumental incentive from both current academic requirements and possible future application in careers (Kimura, Nakata & Okumura, 2001; Burden, 2002; Brown, 2004; Matsuda, 2004). Within the INS scale, participants' particularly high endorsement of the items "Studying English is important because I will need it for my career" (m = 4.87), and "Studying English is important because I will need it for my job" (m = 4.84), support the notion that they view English as having a possible future impact on their careers. The positive response to the international orientation scales reflects those of other studies where an interest in international friendship, media, and exchange have been shown to positively influence motivation (Yashima, 2002; Matsuda, 2004).

In developing a motivational profile for this group of learners, a further goal of this study was to describe differences across cohorts of learners. The results of the questionnaire demonstrated a broad range of revealing differences across the three

cohorts examined. The scores for motivational core scales MI, ALE and DES were all highest in the Year 1 cohort prior to students embarking upon their university programs. These results mirror longitudinal studies showing that Japanese students' English learning motivation peaks in their third year of high school (Sawyer, 2007). While motivation does appear to return somewhat in the Year 3 cohort, it still remains significantly lower than the Year 1 group.

The results of the anxiety scales demonstrated lower levels of anxiety in older groups, with the Year 3 group exhibiting significantly lower levels of communication apprehension and test anxiety than the Year 1 cohort. While the questionnaire does not provide explanatory data for these differences, it is possible that older students' maturity contributed to increasing confidence and a lowering of communication apprehension. Similarly, as students move further away from the 'examination hell' (Aspinall, 2005) experienced earlier in their academic careers, it is possible that they no longer associate English with anxiety-inducing testing. While these theories have intuitive appeal, further research would be necessary to confirm their validity.

Perceptions of the classroom environment fluctuated significantly across all cohorts. Year 1 students' low endorsements of the learning environment, particular teachers, indicate that despite their English learning motivation being at its highest, their perceptions of the learning environment was at its lowest. While there is a comparative rise and fall of these evaluations across Year 2 and Year 3 groups, the overall increase between Year 1 and Year 3 groups provides some hope that the older students are better able to overcome early English learning trauma and develop more positive perceptions of the learning environment as they mature and proceed through their tertiary studies.

6. Conclusion

The results of this study revealed a number of important motivational characteristics of Japanese engineering students learning EFL. Moving on from these findings, educators need to develop motivational interventions relevant to students' specific motivational needs. With this segment of learners that would mean exploring means for increasing motivational intensity, developing more motivating content and pedagogical approaches, and finding ways to decrease classroom anxiety and engender greater self-confidence in learners. Due to the limited scope of this study, broad cross-institutional inquiry would be valuable in corroborating the findings presented above. Further, other research approaches, particularly qualitative inquiry, would be useful in providing additional perspectives on EFL learning motivation in Japanese engineering students. These areas provide direction for future research and will hopefully move us toward a more complete picture of language learning motivation across different segments of learners.

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Appendix A

Pearson correlation coefficient between scales

	MI	ALE	DES	CON	CAP	TAN	FEN	ETE	ECE	INS	IO
MI	1										
ALE	-.03	1									
DES	-.05	.88**	1								
CON	. 48**	-.02	-.02	1							
CAP	-.07	-.33**	-.27**	-.02	1						
TAN	-.26**	-.00	.00	-.51**	-.05	1					
FEN	.02	.50**	.47**	.01	-.75**	.06	1				
ETE	-.00	-.51**	-.47	.00	.09	.07	-.28**	1			
ECE	-.62**	-.00	.00	-.47**	.04	.39**	.00	.07	1		
INS	-.06	.37**	.46**	-.02	-.01	.02	.13*	-.08	-.00	1	
IO	.02	.67**	.67**	.00	-.15*	.02	.32	-.34**	-.00	.49**	1

** Correlation significant at the 0.01 level

* Correlation significant at the 0.05 level

Appendix B

Multiple comparisons between years of study (ANOVA)

Years:		1-2	1-3	2-1	2-3	3-1	3-2
1. MI	Sig. (*p*)	.00	.01	.00	.08	.01	.08
	Mean difference	.39*	.23*	-.39*	-.16	-.23*	.16
2. ALE	Sig. (*p*)	.00	.90	.00	.00	.90	.00
	Mean difference	.34*	.01	-.34*	-.33*	-.01	.33*
3. DES	Sig. (*p*)	.00	.67	.00	.00	.67	.00
	Mean difference	.36*	.04	-.36*	-.31*	-.04	.31*
4. CON	Sig. (*p*)	.10	.53	.10	.40	.53	.40
	Mean difference	-.18	-.07	.18	.10	.07	-.10
5. CAP	Sig. (*p*)	.17	.02	.17	.29	.02	.29
	Mean difference	-.16	-.30*	.16	-.14	.30*	.14
6. TAN	Sig. (*p*)	.16	.00	.16	.01	.00	.01
	Mean difference	.16	.49*	-.16	.32*	-.49*	-.32*
7. FEN	Sig. (*p*)	.82	.50	.82	.39	.50	.39
	Mean difference	-.02	.07	.02	.09	-.07	-.09
8. ETE	Sig. (*p*)	.00	.01	.00	.00	.01	.00
	Mean difference	-.94*	-.24*	.94*	.70*	.24*	-.70*
9. ECE	Sig. (*p*)	.00	.46	.00	.00	.46	.00
	Mean difference	-.45*	-.08	.45*	.36*	.08	-.36*
10. INS	Sig. (*p*)	.13	.59	.13	.42	.59	.42
	Mean difference	.17	.06	-.17	-.10	-.06	.10
11. IO	Sig. (*p*)	.30	.57	.30	.14	.57	.14
	Mean difference	.12	-.07	-.12	-.20	.07	.20

*. The mean difference is significant at the 0.05 level

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A Longitudinal Perspective on EFL Learning Motivation in Japanese Engineering Students

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11 A Longitudinal Perspective on EFL Learning Motivation in Japanese Engineering Students

Michael P. Johnson

Motivation has been identified as an important factor in the learning of second and foreign languages and as such has become the subject of numerous studies over the last several decades. The development of language learning motivation theory over this period has been characterized by an ever-increasing appreciation of the complexity of motivation. This complexity is reflected in the progressive development of more comprehensive representations of motivation (Dörnyei & Otto, 1998), where it is seen as operating within individuals in varying ways and at differing levels while continually being influenced by the formal and informal contexts in which a language is learned or acquired. A significant development arising from this comprehensive approach has been the need to describe motivation as a dynamic phenomenon. Addressing this issue, researchers expanded and developed models and methods for investigating motivation as it changes and evolves within learners (Dörnyei & Otto, 1998; Ushioda, 1996, 2001; Williams & Burden, 1997). The study presented in this chapter endeavors to draw upon these theoretical and methodological developments in describing motivation in Japanese engineering students learning English as a foreign language (EFL), a population of learners which has been identified as having distinct learning characteristics (Kuwabara *et al.*, 2005) and motivational features (Kimura *et al.*, 2001; Saito, 2007; see also Apple *et al.*, this volume).

However, as previous research into this segment of learners has been cross-sectional and quantitative in nature, this study aims to expand upon our understanding of their motivational characteristics through longitudinal qualitative inquiry. While qualitative inquiry has been somewhat underutilized in language learning motivational research (Dörnyei, 2001), it has demonstrated its utility in eliciting the type of rich and descriptive data necessary for describing evolving motivational characteristics in individual learners (Ushioda, 1996, 2001; Yanguas, 2011). Drawing on the strengths

of an interpretive approach, this particular study examined a cohort of Japanese engineering students through interview data collected over their first year of tertiary study. It is hoped that this study will contribute to furthering our understanding of motivation in specific subpopulations of learners and additionally demonstrate the value of qualitative approaches in this endeavor.

Motivational Change in Language Learners

Language learning motivation research has developed significantly over the past several decades, steadily broadening its scope to account for the myriad of factors that have been found to influence this complex phenomenon. To better describe the multifaceted nature of motivation, particularly the variety of cognitive and affective aspects that influence motivation as it evolves in the individual learner both within and outside the classroom, a number of concepts and approaches were drawn from psychological and educational theory (Crookes & Schmidt, 1991; Oxford & Shearin, 1994; Skehan, 1990). This new direction resulted in the development of models and approaches that shed new light on temporal aspects of language learning motivation within learners.

Williams and Burden's (1997) interactive model of motivation draws together a variety of psychological perspectives in describing language learning motivation as a cognitive, constructivist, socially contextualized and dynamically interactive phenomenon. Their model consists of three stages: a reason for doing something, deciding to do something and sustaining effort. These components interact dynamically in the learner while operating within, and interacting with, the broader social context.

Offering a similarly comprehensive and eclectic framework, Dörnyei and Otto's (1998) process model of L2 motivation consists of two dimensions, an action sequence and motivational influences that operate within preactional, actional and postactional phases. The model conceives motivation as the 'dynamically changing cumulative arousal in a person that initiates, directs, coordinates, amplifies, terminates and evaluates the cognitive and motor processes whereby initial wishes and desires are selected, prioritized, operationalized and (successfully or unsuccessfully) acted out' (1998: 64). This particular model is valuable in describing motivational change as it occurs both during specific learning tasks and in broader changes that occur over more extended periods of time.

The complexity underlying motivational processes has also encouraged the use of methodological approaches which yield thick descriptive data. Such information is particularly helpful in relating the wide variety of factors underlying motivational behavior. Ushioda's (1996, 2001) qualitative studies were particularly valuable in providing a new perspective in terms

of both their methodological approach and their findings. In her studies, longitudinal data collected in interviews revealed global changes and qualitative developments in learners over a 16-month period of language study. Global changes included broad general development in the degree of individual motivation, while qualitative developments were classified as changes to particular aspects of motivation derived from personal experiences (Ushioda, 2001). This approach also produced a wide range of insights into specific factors affecting motivation over time, particularly the effect of success on motivation, a broad range of demotivators that arise over the course of language studies and strategies employed by students to motivate themselves.

In a more recent qualitative study examining motivational processes and fluctuations in motivation during task execution, Yanguas (2011) demonstrated the effectiveness of think-aloud protocols in eliciting data from language learners. This study is particularly valuable in corroborating Dörnyei and Otto's (1998) process model and in expanding the scope of qualitative inquiry in L2 motivational research.

A number of studies have demonstrated the temporal nature of language learning motivation in Japanese tertiary students (for a detailed overview, see Hiromori, this volume). In an early longitudinal study by Berwick and Ross (1989), motivational intensity was shown to peak at the end of secondary school, and then decline during university. Using learner diaries to track motivational change over a year of tertiary study, Matsuda (2004) revealed that motivation fluctuated according to students' instrumental needs and opportunities to interact with international students. In a further study tracing motivational change over the course of an academic year, Nitta and Asano (2010) demonstrated that motivation fluctuated differently in distinct groups of learners. Some of the variables influencing motivational change were demonstrated by Koga (2010), who revealed that learners' anxiety levels and sense of cooperativeness played an ongoing role in motivational levels. In a study examining motivation from a process model perspective, Hiromori (2009) demonstrated that Japanese learners' subjective self-evaluation of value and expectancy played an important role in maintaining and regulating motivation.

In examining the motivational research conducted in Japan, it is evident that Japanese university students experience fluctuations in motivation while learning English. The literature also reveals that there has been little qualitative inquiry into temporal aspects of language learning motivation in Japan (Matsuda, 2004), and few studies concerning the specific motivational characteristics of non-English majors (Kimura *et al.*, 2001; Saito, 2007). This study aims at addressing these issues through a longitudinal interview-based examination of Japanese engineering students learning EFL. In order to better understand the motivational characteristics of this segment of learners as they matriculate into, and proceed through, their engineering programs, the following research questions have been developed to guide this inquiry.

(1) Have students experienced changes in English learning motivation in the past (prior to entering university), and if so, what factors do they attribute to changes in past motivational states?
(2) In what ways do students' EFL learning motivation change over the course of their tertiary engineering programs?
(3) What factors contribute to fluctuations in EFL learning motivation over the course of engineering programs?

Method

Participants

A total of 16 Japanese university freshmen participated in the initial round of interviews. The average age of participant was 18 years. The gender distribution of the sample included 13 male, and 3 female, participants. In the first round of interviews, participants indicated that they had been studying English for an average of 6.5 years, with a range of between 6 and 10 years. All participants were engineering students at a national university in northern Japan, with majors in mechanical (n = 9), civil (n = 5) and systems engineering (n = 2). Thirteen participants from the original group returned in the first semester of their sophomore year to participate in the second round of interviews.

Data collection

An invitation to participate in this study was distributed to freshmen during their first week of classes. Students interested in participating received an explanation of the nature of the study and were provided with an open interview schedule, which enabled them to schedule interviews at their convenience. Prior to conducting each interview students were once again provided a brief explanation of the nature of the study, and asked to fill out informed consent forms as well as a brief demographic profile.

The interview itself was semi-structured in format. This particular format was chosen due to the degree of power, control, flexibility and insight it affords the researcher (Nunan, 1992). The interview consisted of a set of base questions (Table 11.1) from which the interviewer could digress. The same base questions were used in a series of two interviews conducted with the same cohort of participants in the first semester of their first and second years of university. The interviews took between 10 and 15 minutes to conduct and focused on past and present motivational states, factors contributing to these states and other areas considered relevant to this particular population of learners including career aspirations, status of university life, confidence in learning and using English and goals related to language

Table 11.1 Base questions used in the semi-structured interviews

Question number	*Question content*
1a. (Year 1)	How was your English learning motivation prior to university? Was it consistently high, moderate, or low, or, did it fluctuate? What factors lead to changes in your English learning motivation in the past?
1b. (Year 2)	How has your English learning motivation been over the past year? Has it been consistently high, medium or low? Or, has it fluctuated? What factors led to changes in your English learning motivation in the past year?
2.	How do you feel about studying at university this time?
3.	How would you describe your present motivation to learn English?
4.	Are you presently thinking about your future career? Does your future career have any influence upon your motivation to learn English?
5.	Have other events or activities in your life influenced your feeling about school or your English studies?
6.	Do you enjoy your university life? What do you enjoy about it?
7.	How do you think your overall school experience is affecting your English learning motivation?
8.	Are you confident in English class? What do you think are your present strengths and weaknesses in English?
9.	At the moment, do you have goals in your English studies? If yes, what are your goals?
10.	Is there anything presently having a negative effect on your English learning motivation?

learning. These questions were chosen due to their perceived utility in eliciting data on internal and environmental factors contributing to EFL motivation in this particular sample.

Data analysis

The interviews were conducted in Japanese by the author, recorded, transcribed and then translated from Japanese to English by a professional translator. The English scripts were then coded and subjected to content analysis. Responses were grouped according to frequency and emergent themes. An initial list of frequencies and thematic groups was developed by the author, and then compared against a second list independently constructed by a colleague. Themes were then organized into three types, *basic themes*, *organizing themes* and *global themes* following the protocol established

by Attride-Stirling (2001), which involves the hierarchical arrangement, selection and organization of themes into a thematic network.

Results

Past (pre-university) motivational states

Data derived from the first round of interviews indicated that participants had experienced fluctuations in motivation in their previous English studies, with 11 participants indicating they had experienced a transition from high-to-low motivational states, and two participants a shift from moderate-to-high motivation. Three students indicated relatively consistent motivation, with two citing consistently high, and one consistently low, levels. Students indicating changes in their past motivational states attributed these fluctuations to the factors listed in Table 11.2. The most significant positive causes were attributed to learning environment factors (class content and teachers), while the most significant negative factor was the perceived difficulty of English.

Changes in English learning motivation in university

Interview responses indicated that the majority of students (n = 12) were highly motivated to learn English in the first semester of their first year of university. Of the remaining participants, two indicated moderate, two indicated low and one a mixed motivational state (with motivation dependent on the characteristics of particular classes). In the second year, the percentage of students claiming to be highly, or somewhat highly, motivated dropped, and there was an increase in the number of students who claimed to have low, or moderately low, motivation. The number of moderately motivated students also increased (Table 11.3).

Factors contributing to motivational states in university

Factors contributing to motivational states at first and second year intervals are summarized in Figure 11.1. While thematic networks generally

Table 11.2 Factors affecting past motivational states (pre-university)

Positive influences on motivation	*Negative influences on motivation*
Class content (n = 7)	Perceived difficulty (n = 14)
Teacher (n = 4)	Content (n = 9)
Experiences (n = 3)	Teacher (n = 6)
Entrance tests (n = 1)	Lack of ability (n = 4)

Table 11.3 Current English learning motivational state

Degree of motivation	*Year 1 (n =16)*		*Year 2 (n =13)*		
	n	*%*	*n*	*%*	*Net change %*
High	10	62.5	4	30.7	-31.8
Somewhat high	2	12.5	1	7.6	-4.9
Moderate	2	12.5	4	30.7	+18.2
Moderately low	0	0	1	7.6	+7.6
Low	1	6.25	2	15.3	+9.05
Variable: dependent on class	1	6.25	1	7.6	+1.3

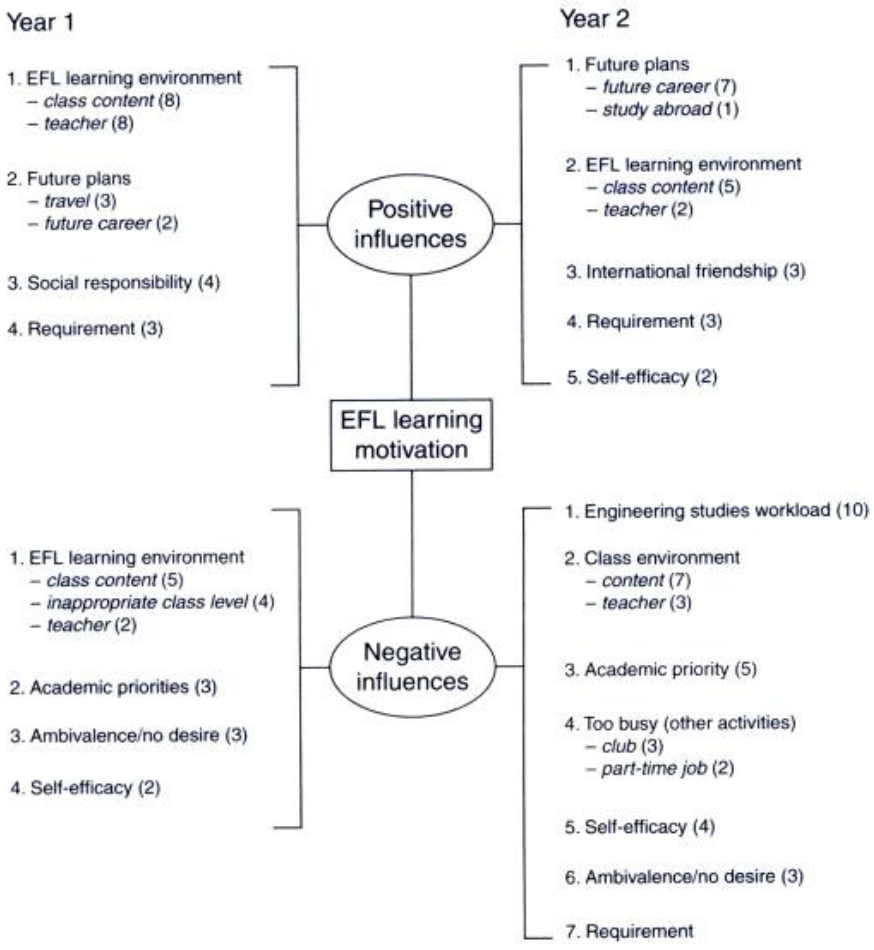

Figure 11.1 A thematic network illustrating motivational influences across first and second years. Year 1: n = 16. Year 2: n = 13

do not represent themes hierarchically, focusing rather on fluidity and interconnectivity of themes (Attride-Stirling, 2001: 389), the network shown in Figure 11.1 is hierarchically organized to illustrate the changing relative importance of motivational variables across years. The network is organized around positive and negative motivational influences, which are classified here as *global themes*. The numbered items represent *organizing themes*, while subordinate *basic themes* are represented in italics. These two theme classifications are hierarchically presented, with frequency of response declining down the respective lists of motivational influences. Fluctuations in the relative strength and frequency of these factors across the year examined are described below.

EFL learning environment

First year students identified the learning environment as both the most significant positive and negative factor influencing their motivation. Class content was cited most frequently as a positive influence on motivation, with students finding interesting and appealing classes to be more motivating. Class content was also cited as a leading demotivator in first and second years, with students commenting that they particularly disliked dry and uninteresting class content.

The teacher appeared to have a particularly important role in motivating students in their first year of study, while not being cited as frequently in the second year. In terms of being a demotivating factor, the opposite relationship can be observed in the second year, where more students found the teacher to negatively affect their English learning motivation. Interestingly, the positive influence of what students perceive to be good teachers can have positive effects beyond individual classes, as Student K explained, 'I have two English classes, one I like and one I don't really. The one class I really like the teacher, so my overall motivation is high for learning English, even though I don't like the other class'. In an even stronger indication of the potential importance of the instructor on motivation, Student J commented 'My motivation all depends on whether or not I get along with the teacher, the teacher is the biggest factor'.

Future plans

Future plans emerged as the most frequently cited motivator in the second year. While only two first year students identified jobs as a positive influence, seven identified it as an important motivator in first year. While three first year students had vague interest in using English for future travel, only one first year student responded that travel overseas, in his case to study abroad, was a motivator for learning English. The emerging

importance of English for future careers was particularly revealed in second year students' discussions of their career aspirations. Second year students identified specific TOEIC scores they would need to get hired or advance in particular companies, demonstrated an awareness of other English testing protocols for specific firms and identified particular companies with international staff and offices overseas. A number of students who could not identify a specific need for English in their future careers still seemed aware of its utility in their future job search, as Student C explains, 'If I have only Japanese, I can apply only for particular jobs, but if I could speak English, it would expand the types of jobs I could apply for. So, of course English would be valuable'. A sizable minority of students (5 out of 16 in first year and 5 out of 13 in second year) stated that they could see absolutely no connection between English and their future careers at all.

Social responsibility

Another important difference in first year students was the presence of *social responsibility* as a motivator. This category comprises responses indicating a positive motivation to study English due to students' perception that, as university freshmen, it was their responsibility to work diligently in all classes. Along these lines, Student H commented 'I think I should try because I'm in university now, students should study hard in university'. Some students consciously used this new social situation as an opportunity to reset their English motivation, as Student K explained, 'I feel I have to study now that I'm in university, I feel this is a new start for me with studying English'. This type of response was not present in second year interviews.

International friendship

In the second round of interviews, a number of students identified *international friendship* as an emerging positive influence on their English learning motivation. Some participants, such as Student E, formed such friendships with international students in their regular classes: 'I made friends with some international students who couldn't speak Japanese well. I had the opportunity to speak with them in English, and although I couldn't speak well, I felt I slowly improved, I learned more words. I really thought then that English was a common and useful language'. Several other students ($n = 4$) sought out international experience through participating in their university's international club, and most found these experiences to be positive, as explained by Student A, 'I've been doing things with the international exchange club, and I now feel I want to talk with the international students more, so I want to improve my English for that'.

Requirement

A number of students in both first and second years indicated that they were positively motivated to learn English in order to obtain academic credits. As a breadth requirement for their degrees, students at the institution where this study took place are required to obtain credits in both English and an additional foreign language. While a number of students embraced this requirement as a means for generating positive instrumental motivation, one participant viewed it negatively. In explaining the demotivating influence of mandatory English study, student D commented 'I feel like I'm doing it because I have to, it's not really my choice, so my motivation is not high'.

Self-Efficacy

A lack of confidence in English skills was identified by several participants as a demotivating influence in both first and second year interviews. With some students, this self-perceived lack of ability appears to contribute to a state of ambivalence toward English learning, as expressed by Student C in his second year interview: 'I'm not really interested in English, and I'm not good at it, so I can't get up for it'. While there was an increase in the number of students citing a lack of self-efficacy in the second year, the second round of interviews also revealed a new group of students who described an increase in EFL learning motivation accompanying a self-perceived increase in their English abilities. Student K, enrolled in an advanced level English class, stated 'I'm in a reading class that is supposed to be a high level, but I find I can do it, it's not too difficult, so my motivation is up because of that'. In both rounds of interviews all students were asked whether or not they had confidence in using English. Twelve first year (75%) and 11 (84.6%) second year students replied that they had absolutely no confidence in using English at all. The remaining students in both years explained that while they had confidence in classroom English, they did not have confidence in using 'real' English outside the classroom.

Engineering studies workload

The emergence of academic workload as a demotivator was a significant change in the second-year interviews. Some students, such as Student E, were simply overwhelmed by the amount of work in their second year, as the following comment indicates, 'In the first year there wasn't so much (work), and I felt I had more time to devote to English. But now it's more difficult and I'm busier with my English classes. I'm to a point where I feel I don't have time for English'. For some students, this appeared to represent a source of internal conflict, as indicated by Student B: 'I really felt like

I want to study English more, but I have so much homework in my other classes that I simply don't have the time'.

Academic priorities

Distinct from the external pressures placed upon students by the academic workload of their major field of study was what appeared to be internal self-regulation of effort applied in different classes. These instances were classified as *academic priorities* and involved a conscious internal decision to reserve their effort and energies for study in their own major. In both first and second year interviews other academic priorities served as a demotivating influence on English learning. This sentiment is summarized well by Student B who stated 'I am at an engineering university, so I really don't feel that I want to put a lot of effort into studying English, rather I feel I should concentrate on my major because that is what I came here to study'.

Other activities

Another demotivating factor emerging in the second-year interviews was *other activities*, or activities not directly tied to English learning but still having an effect on EFL learning motivation. Students identified club activities and part-time jobs as being time consuming and influencing their ability to concentrate on, or dedicate time to, their English studies. For some students, such as Student R, outside activities combine with other class and workload factors to drive English lower on their list of priorities: 'Well, I guess I'm busy with my classes and other things, so that takes away from my motivation. I'm really busy with my club as well, so that also takes a lot of time away from my English learning time'.

Discussion

One of the aims of this study was to determine students' EFL learning motivational states prior to entering university and to explain factors contributing to past motivational change. The interviews carried out with first-year students indicated that the vast majority had experienced changes in English learning motivation levels prior to university, with the most common pattern being a gradual drop in motivation over the secondary school years, a pattern that has been observed in other Japanese secondary learners (Hayashi, 2005).

Students most commonly attributed motivational loss to the increasing difficulty of English and a resultant drop in their perceived ability to succeed in their English studies. A number of students specifically attributed this increasing difficulty to preparation for the national university

admissions center test. Class content related to university admissions tests was cited as another strong contributor to demotivation, as students cited test-oriented class content, specifically rote memorization of vocabulary, long readings and difficult grammar, particularly negatively. These findings reflect those of Sakai and Kikuchi (2009) who also found that Japanese high school students were demotivated by English class content and instructional materials. Alternatively, the five students who indicated high motivation at the end of secondary school attributed this level to the instrumental importance of achieving the English level necessary to enter a national university. Although a minority in this study, this group's profile is in keeping with other Japan-based findings that identified a motivational peak in high school seniors (Berwick & Ross, 1989; Johnson, 2010; Sawyer, 2007)

This study attempted to describe changes in participants' EFL learning motivation over the first year of their engineering programs and to examine factors contributing to ongoing fluctuations. First-year students appeared to be much more highly motivated than second-year students. One reason for this was students' positive perception of the university English learning environment. Several first year students expressed relief that they were no longer studying for entrance exams and could now study English more for the sake of simply learning the language. Compared to the test cramming experienced in secondary school, the varied classroom content in the first year of university appeared to be a motivating factor. While classroom content was also cited as a demotivating factor by some students, its frequency was relatively lower.

While content was the most frequently mentioned learning environment factor across both years, the particular importance of the teacher as a motivating factor also emerged. This is consistent with the findings of Falout *et al.* (2009) who revealed that teachers, while being potentially both positive and negative influences, ultimately had more of an inspirational effect on Japanese English learners. While recent research suggests that Japanese teachers don't generally think of themselves as a demotivating factor in the classroom (Abe *et al.*, 2010), these findings do indicate that instructors need to be aware that their efforts can result in positive and far-reaching effects on student motivation.

Another factor positively influencing students' first-year motivational state was the role of social responsibility. Social responsibility has been shown to influence learning behavior on a number of levels and is particularly useful in explaining learning goals and beliefs (Wentzel, 2000). Japanese students entering into schools convening professional degrees in areas such as engineering have been shown to be particularly aware of the hard work and commitment required to succeed in such programs (Sugimoto, 2003). The participants in this study demonstrated this commitment in their first-year English studies, but showed a distinct shift in effort in their second

year. In these instances Norton-Pierce's (1995) concept of *investment* appears to find particular relevance as students' effort to learn English appears tied to particular self-identity conceptions at different stages of learning. In the first-year students saw themselves as new university students who were required to apply concerted effort across all subjects, while in the second year they saw themselves primarily as engineering students, whose efforts should focus on their goal of earning engineering qualifications.

While overall levels of motivation appeared to drop in the second round of interviews, there was an increase in the number of second year students who identified the future value English as a positive influence on their motivation. These students appeared to have a very specific idea of where and how English would benefit them professionally in the future. Several identified specific language requirements for entering particular engineering firms, and were cognizant of which companies were more internationally oriented. Other students in this group were also aware of particular English skills required for carrying out tasks in their future careers, specifically mentioning the need for specialized technical English in programming, electrical engineering and aerospace technology. The strong instrumental orientation of these participants reflects findings in other studies examining engineering majors learning EFL in Japan (Kimura *et al.*, 2001). Interestingly, some participants mentioned that while they were aware of the potential future value of English that they remained uninterested in dedicating time and effort to it, as Student C commented, 'I think English might be useful for future jobs, yeah sure, but not enough to make me want to learn it in class, or try harder in class. In class it's not real English anyways, so I don't think it would help me in using English anyways'.

An important theme that emerged in several interviews was the role of self-efficacy in English learning motivation. Results revealed that a number of students lacked English learning confidence both prior to, and during, tertiary studies. This lack of confidence has been tied to motivation in Japanese EFL learners in a number studies (Burden, 2002, 2004; Falout & Maruyama, 2004; Tsuchiya, 2006; Warrington & Jeffery, 2005). However, in this study, while the majority of participants across both years claimed to have little confidence in learning English, the number of students claiming to be highly motivated was significantly higher in the first year. One possible explanation for this inconsistency is that student responses reflect Japanese modesty norms (Brown, 2004), where in maintaining a culturally acceptable level of modesty most participants simply responded that they are not good at English and had no confidence in learning the language. With the majority of students claiming to have low confidence in learning English, regardless of their actual abilities, it makes it somewhat difficult to discern the true connection between self-efficacy and motivation in most participants. However, in the few students who claimed to have some degree of confidence in learning and using English, the cited positive relationship between

classroom success and motivation suggest that confidence can have a positive influence on EFL learning motivation.

The interviews also revealed that the majority of students who interacted with international students were positively motivated by these exchanges. Speaking with foreign students appeared to help participants appreciate the practical value of the English language, and provided learners a sense of intrinsic satisfaction. Four of these students also mentioned being members of their university's international club, and as such, appeared positively inclined to participate in exchange activities. This finding reflects Yashima's (2002) study, which also revealed a positive connection between international orientation and English motivation in Japanese information science majors.

Pedagogical Implications and Conclusion

Prior to entering into their engineering programs, the majority of the students examined in this study demonstrated fluctuations in their EFL learning motivation. Participants' pre-university English learning experiences were characterized by a gradual loss of motivation accompanying reduced levels of self-efficacy and a related growing dislike for difficult and unappealing class content. The emergence of positive motivational orientations in the first year of university provides teachers with evidence that such negative motivational states can, at least temporarily, be overcome. Particularly actionable from a teacher's perspective are factors within the classroom-learning environment. Students' attraction to varied classroom approaches and content indicates that teachers involved with these learners need to expand instructional approaches beyond those experienced in high school, introducing a wider variety of communication-oriented listening and speaking skills, which appear to provide greater intrinsic and practical appeal.

Another possible direction of focus can be drawn from the clear understanding of the future professional value of English demonstrated by many second-year students. The high level of motivation in students who were aware of the specific English requirements for entering engineering firms (particularly TOEIC scores), and carrying out future jobs (particularly technical English), indicate that these areas can have instrumental appeal. English class content integrating test training and technical English for particular engineering careers may serve to more clearly connect engineering and English. In addition to increasing instrumental motivation, this would hopefully encourage students to think of English as being inexorably connected to engineering careers, and not simply as a peripheral, or worse yet unnecessary, academic subject.

Clear goal setting about what content students should master is also important, but such goals need to be structured in a manner in which they

are perceived to be achievable. Particularly considering participants' stated lack of EFL learning self-efficacy, it is necessary to introduce such content in a manner that enables learners to repeatedly experience success and gradually build their confidence. While this study also described a number of other peripheral factors influencing motivation, these areas outlined above represent immediate directions for developing classroom approaches and materials that meet the motivational needs of this particular group of learners.

While this study revealed a number of important characteristics of motivational change in this population of learners, it is necessary to acknowledge its limitations. Due to its qualitative approach and limited sample size, the findings may be limited to the sample studied. As such, these findings may not be applicable to the entire population of engineering students in Japan, but they do provide an in-depth perspective of how and why English learning motivation changed in a small sample of learners. Further inquiry from other methodological perspectives, particularly mixed-method approaches, would be valuable in corroborating and expanding upon the findings discussed above.

Due to its complex and dynamic nature, language learning motivation represents a challenge to researchers. However, as this study demonstrates, qualitative longitudinal inquiry can provide valuable perspectives into the changing nature of EFL learning motivation in specific populations of learners. It is hoped that continued inquiry will provide further insights into this phenomenon, and this in turn will contribute to a more comprehensive understanding of the role of motivation in language learning.

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Assessing Curricular Alternatives: Graded Readers and EFL Learning Motivation in Non-English Majors

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Assessing Curricular Alternatives: Graded Readers and EFL Learning Motivation in Non-English Majors

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Abstract

This study set out to evaluate the impact of instructional materials on the English as a Foreign Language (EFL) learning motivation of a specific population of learners. More specifically, it sought to evaluate how the use of graded readers, used in conjunction with online learning and The Moodle Reader Module, impacted the EFL learning motivation of Japanese engineering majors. Following a semester-long online course, a questionnaire consisting of four scales adopted from Keller's (2010) Instructional Materials Motivation Survey (IMMS), and open-ended items, was administered to a sample of 215 learners. Results revealed positive endorsement attention, relevance, confidence, and satisfaction scales. The open-ended items also revealed an overall positive endorsement of graded readers and were valuable in providing descriptive insights into the results of the IMMS. The study concludes by summarizing the positive and negative aspects of using graded readers in online environments with this particular population of learners, and suggests avenues for future research.

Introduction

In today's globalized world, English as a Foreign Language (EFL) instruction has expanded commensurate with the increasing perceived importance of English as the international language of business and commerce (Crystal, 2003; Mok, 2006). One result of this expansion has been an increase in English instructional hours across all educational levels in countries such as Japan (Fujimoto-Anderson, 2006). In terms of tertiary education in that country, this has resulted in a rising number of EFL classes across all majors and fields of study. For learners pursuing advanced degrees or licenses in areas such as engineering, such foreign language requirements can be perceived negatively; as an unwelcome burden that distracts from primary academic goals (Jacques, 2001; Koga, 2010; Kuwabara, Nakanishi, & Koma, 2005). In such instances, mandatory English education can be perceived as adversarial, and therefore may not be willingly embraced by learners. This outlook, combined a number of cognitive and affective variables observed to contribute to demotivational states in Japanese tertiary EFL learners (Berwick & Ross, 1989; Burden, 2002; Falout & Maruyama, 2004; Saito, 2007), represents a particular challenge to EFL educators teaching engineering and science majors in Japan .

While a great deal of research has been conducted into the characteristics of Japanese learners' EFL learning motivation (see Johnson, 2009), little inquiry has been directed toward how particular curricular interventions can influence and affect learners' motivational states. One area which holds significant potential, and which instructors have some degree of control over, is the content of instruction. Instructional content, particularly instructional materials, has been identified as having potentially motivating and demotivating influences on learners (Chambers, 1998, Falout & Maruyama, 2004; Gorham & Millete, 1997; Peacock, 1997). The demonstrated importance of this classroom variable suggests that its augmentation might provide a possible direction for instructors in order to improve motivational engagement in learners.

It is particularly difficult for educators to find instructional materials that are consistently motivating and effective for a wide range of learners. The recent development and expansion of graded readers series and extensive reading resources, and the plethora of research that has accompanied their increased use (see Day &

Bramford, 1998; Krashen, 2004 for summaries) have rendered these materials and approaches reliable and proven options for foreign language instruction. The use of graded readers in extensive reading environments have demonstrated that they not only improve learners' reading speed and proficiency (Bell, 2001; Constantino, 1995; de Morgado, 2009), but are an efficient means for implicit acquisition of vocabulary and grammar structures (Horst, 2005; Horst, Cobb, & Meara, 1998; Waring, 2009). In addition to these language learning outcomes, learners' attitudes towards, and degree of enjoyment and interest in, reading have been shown to improve when using these materials and approaches (Al-Homoud & Schmitt, 2009; Cho, & Krashen, 2001; Dupuy, 1997). Similar positive results have been observed with Japanese learners using graded readers and taking part in extensive reading programs (Critchley, 1998; Forrest, 1997; Hayashi, 1999; Iwahori, 2008; Mason & Krashen, 1997; Powell; 2005; Robb & Susser, 1989; Tanaka & Stapleton, 2007).

Motivation and extensive reading

In addition to the benefits discussed above, ER has also been identified as contributing to motivation in learners. Motivation has been identified as an important individual difference in language learners (Dornyei, 2006; Oxford, 1992; Skehan, 1991), and appears to play a particularly important role in L2 reading (Brantmeier, 2005; Gee, 1999; Grabe, 1991). In terms of extensive reading, an early study by Elley (1991) reported that motivation appeared to accompany improvement in reading proficiency and attitudes in "book flood" programs in Fiji. She observed than an increase in intrinsic motivation appeared to stem from learners' experiences selecting and sharing picture books with others. A high state of intrinsic motivation, or "flow", was also observed in readers by McQuillan and Conde (1996) who reported that texts that were perceived to be interesting, or to have personal or intellectual value, were particularly effective in promoting optimal engagement in learners. In a study expressly examining the motivational and attitudinal impact of extensive readers in Tunisian EFL students, Maamouri Ghrib (2003) revealed that ER was particularly effective in promoting initiating motivation in learners. However, the interest value of reading resources and

program structure were important factors in sustaining motivation over a five-semester reading program. In a more recent study, Arnold (2009) observed motivation accompanying an increase in confidence in learners reading in a modified ER program for German as a FL in the United States. Interviews with readers participating in the study revealed that some became motivated to read independently outside of class assignments. A similar outcome, with ER affecting learners positively in terms of motivated autonomous learning, was revealed in Hitosugi and Day's (2004) examination of JFL learners' in the US.

Extensive reading has also been demonstrated to positively affect language learning motivation in Japanese EFL students. Yamashita (2007), in an examination of the effect of L1 to L2 reading attitude transfer in Japanese university across a number of majors, revealed that while reading attitudes do in fact transfer from L1 to L2, reading abilities and strategies do not. An implication of these findings was that motivation could be positively affected by positive attitude transfer and accompanying proficiency gains, while students with poor L1 reading attitudes would be harder to motivate. In a qualitative longitudinal case study examination of two Japanese middle school students taking part in an ER program, Nishino (2007) revealed the dynamic nature of reading motivation. Specific causes of fluctuations in motivation were: achievement, the pleasure or flow of reading, confidence, orientation toward independence, interest in content, preferences in terms of authentic texts, and other academic pressures (entrance exams). Nishizawa, Yoshioka and Fukuda (2010), in examining the effects of a four-year ER program on students at a national technical college, reported that ER lead to significant improvement in English proficiency only after 2-3 years of reading simple stories, demonstrating a minimum threshold of 300,000 words for improvement. The participants, who were described as "reluctant readers", were shown to be motivated by reading interesting and easy graded readers.

Study overview

The demonstrated value of ER in improving reading proficiency and promoting learner motivation resulted in it being selected in a modified form for trial in the EFL

reading course being examined in this study. The institution in which this study took place was an engineering university in Japan, where students were perceived to be reluctant EFL learners in need of more motivationally stimulating curricular content. The trial course was structured around the use of graded readers in conjunction with the Moodle Reader Module; an optional add-on to the open-source Moodle course management system consisting of quizzes for thousands of graded readers from all major ELT publishers. In this semester-long trial EFL reading class, students were required to check graded readers out of the school library, and then take quizzes on a weekly basis in the school's computer lab. Students were evaluated on the total number of words read from quizzes that were successfully passed. The present study describes the results of a formal retrospective evaluation of the materials used in course. It was hoped that this formal evaluation would provide insights into the value of such a program, and into how it might be improved in the future. The following research questions are reflective of these overall goals:

RQ1: How did the use of graded readers and the online evaluation system affect learner motivation?

RQ2: How did learners generally perceive the use of graded readers and the online evaluation system?

RQ3: How did the characteristics of specific graded readers affect their appeal to students?

Methods

Data collection and analysis

Data collection for this study was carried out with a questionnaire comprised of an adapted version of Keller's (2010) Instructional Materials Motivational Survey and additional open-ended items (see Appendix 1). The IMMS was originally designed to measure attitudes, relevance, confidence, and satisfaction components of instructional materials according to Keller's ARCS model of motivation. Since its creation, the

instrument has proven to be flexible enough to be adapted and used to evaluate instructional materials across wide range of settings and disciplines (Bollinger, Supanakoorn, & Boggs, 2010; Corbalan, Kester, & Van Merrienloer, 2009; Jakobsdottir & Hooper, 1995; Pittenger & Doering, 2010; Rodgers & Winthrow-Thorton, 2005). The questionnaire designed for the current study retained the four main variables of the original IMMS, but the items were rewritten and scales adjusted to better assess the specific characteristics of graded readers. This adapted version of the IMMS was piloted with a sample of thirty (n=30) students at the same institution where the main study was targeted to take place. Cronbach's Alpha for each scale indicated good internal reliability (Confidence: α=.75, Attention: α=.76 ; Relevance: α=.78; Sastisfaction: α=.81) according to the .70 threshold suggested by Dörnyei (2003). Due to its satisfactory internal reliability, the IMMS portion was used without further revisions. An additional section of open-ended items was added to the questionnaire in order to obtain learner feedback on their impressions of graded readers and the online system, and the specific characteristics influencing perceptions of graded readers. An open-ended format was chosen for these items due to the range and variability of responses it can elicit. It was hoped that such data would provide deeper insights into the range of impressions and characteristics that contributed to learners' experiences using the graded readers in an online environment.

The questionnaire was administered in the final week of a fifteen-week semester and required approximately ten minutes to complete. A total of 230 questionnaires were collected, of which 219 (N=219) were retained for analysis. Questionnaires that were discarded were those that were either incomplete or not appropriately filled out. Of the questionnaires retained for analysis, all had completed IMMS sections, while open-ended items were filled out selectively by participants. IMMS results were then entered into Predictive Analytics Soft Ware (PASW) version 18 to derive descriptive and inferential statistics. Open-ended items were translated into English, and results to each item were coded and separated into themes. Following first round coding, themes were revised and re-organized with input from a colleague.

Participants

All participants were second year Japanese engineering majors with specialties in chemical and mechanical engineering. A total of 230 (n=230) students filled out questionnaires, although the data represents responses from 219 (N=219) completed questionnaires. The participants were of mixed English ability, although the majority was at a low intermediate reading level. The reading class represented the seventh of eight mandatory EFL classes students were required to take as part of their general humanities requirements for their Bachelor of Engineering degrees.

Results

IMMS scales

Results of the IMMS indicated positive overall endorsement of the four scales used in the questionnaires. The most highly endorsed scale was Satisfaction (SAT), with a mean of 3.41 derived from the five-point Likert scale items. This was followed by Confidence (CON) (M=3.32), Attention (ATT) (M=3.29) and Relevance (REL) (M=3.20). The Cronbach's alpha for each scale (CON $\boldsymbol{\alpha}$=.667; ATT: $\boldsymbol{\alpha}$=3.29; REL: $\boldsymbol{\alpha}$=.78 and SAT: $\boldsymbol{\alpha}$=.79) indicated good internal reliability for each scale. While SAT was the most highly endorsed overall, its average range of 2.86 to 3.86 indicates a range of variability in responses.

Table 1: Graded Reader IMMS Scale Summary

	n of items	n	$\boldsymbol{\alpha}$	m	min	max	range	variance
CON	7	219	.667	3.32	3.04	3.61	.571	.053
ATT	10	219	.807	3.29	3.04	3.61	.580	.044
REL	7	219	.784	3.20	2.71	3.45	.744	.056
SAT	6	219	.792	3.41	2.86	3.83	.968	.143

Results of individual IMMS items are provided in Table 2. The two most highly endorsed items were from SAT scales (SAT5 m=3.83; SD= .99: SAT 6 m=3.75, SD=.98), followed by the confidence item CON4 (m=3.61 SD=1.01) and the attention

item ATT5 (m=3.61; SD=0.97). The four least endorsed items were REL3 (m=2.71: SD=.95), SAT2 (m=2.86 SD=1.06), ATT8 (m=3.03 SD=0.81) and CON2 (m=3.04 SD=1.02).

Table 2: Graded Reader IMMS: Item Summary

					item response frequency (%)				
	n	M	SD	var.	1	2	3	4	5
CON1	219	3.25	1.03	1.07	5.5	15.1	40.2	26.9	12.3
CON2	219	3.04	1.02	1.04	8.7	15.5	46.6	21.0	8.2
CON3	219	3.15	1.04	1.08	6.8	18.3	35.6	30.6	8.7
CON4	219	3.61	1.01	1.03	2.7	12.3	24.7	41.1	19.2
CON5	219	3.58	0.92	.849	2.7	7.3	32.9	42.5	14.6
CON6	219	3.14	0.78	.621	2.7	15.5	47.0	33.8	.90
CON7	219	3.46	0.98	.974	3.7	11.0	35.2	36.1	14.2
ATT1	219	3.18	1.02	1.05	5.9	18.7	34.2	32.9	8.2
ATT2	219	3.13	0.99	.996	6.4	17.8	38.8	30.1	6.8
ATT3	219	3.32	1.03	1.06	6.8	10.5	37.0	34.7	11.0
ATT4	219	3.57	0.96	.924	2.7	9.1	32.4	39.3	16.4
ATT5	219	3.61	0.97	.953	2.3	11.4	26.0	42.9	17.4
ATT6	219	3.07	0.94	.898	6.4	17.4	42.9	28.8	4.6
ATT7	219	3.31	1.02	1.04	5.9	12.3	37.4	33.3	11.0
ATT8	219	3.03	0.81	.668	4.6	16.0	52.5	25.1	1.8
ATT9	219	3.15	0.92	.857	4.6	16.0	45.2	27.9	6.4
ATT10	219	3.50	0.96	.939	3.7	7.8	38.4	34.7	15.5
REL1	219	3.29	0.99	.988	5.5	14.6	32.9	39.3	7.8
REL2	219	3.45	0.92	.864	2.7	10.5	37.0	37.9	11.9
REL3	219	2.71	0.95	.921	12.3	25.6	42.5	17.8	1.8
REL4	219	3.23	1.02	1.04	5.5	17.8	32.9	35.2	8.7
REL5	219	3.16	0.86	.743	4.6	13.2	46.6	32.4	3.2
REL6	219	3.32	0.95	.917	4.1	11.9	42.0	31.5	10.5
REL7	219	3.27	0.85	.732	2.7	13.2	42.9	36.1	5.0
SAT1	219	3.60	1.08	1.18	5.0	11.0	23.3	39.7	21.0
SAT2	219	2.86	1.06	1.12	11.0	24.7	37.9	20.1	6.4
SAT3	219	3.27	1.04	1.10	5.5	16.0	36.1	30.1	12.3
SAT4	219	3.15	0.97	.942	5.5	16.0	43.4	27.4	7.8
SAT5	219	3.83	0.99	.985	1.8	7.8	24.7	37.0	28.8
SAT6	219	3.75	0.98	.966	2.3	8.2	25.1	40.6	23.7

Correlation between scales

The direction and strength of relationships between scales was investigated using Pearson product-moment correlation coefficient. Results indicated positive correlations

between all scales (Table 3), with correlations falling between the r=.50 to r=1.0 range indicative of a strong positive relationship (Pallant, 2007). These findings reflect the high correlational relationships between IMMS scales observed in other studies (Keller, 2010).

Table 3: Pearson product-moment correlation between GR-IMMS scales

	1	2	3	4
1. SAT	--	.640**	.713**	.573**
2. REL		--	.774**	.591**
3. ATT			--	.733**
4. CON				--

**p<.001(2-tailed)

Open-ended item results

Overall impressions of graded readers

The first open-ended question was: "How did you feel about using graded readers?" A total of 196 responses were received for this item. The majority of responses were positive (74%: n=149), while 27, or 13.7%, were negative. The remainder of responses were either mixed (n=12: 6.1%), with students expressing mixed positive and negative feelings, or ambivalent (n=8: 4%), with such participants expressing that they had no particular feelings using graded readers.

The overwhelmingly positive results produced a number of specific reasons why graded readers and the online reading course were perceived positively by learners. The most frequently (n=22) cited positive reason was the level of improvement students experienced. Sample responses from this category included: "It was very difficult at the beginning, but I got better at reading from the middle of the semester" (S63). This was followed by the selectivity aspect of the course (n=21), where learners expressed positive feelings about being able to choose their own books. An example of this kind of response was "I thought it was good, choosing books that matched my interest and

level" (S110). Receiving the same number of responses (n=21) was "enjoyment", with learners stating that using the graded readers was an enjoyable experience. A sample of this type of response was "It was really fun, I enjoyed reading the books, all the different kinds of stories" (S59). The next most frequent positive response category was "confidence" (n=18) where participants described increasing confidence the more they read, and in some cases, the more quizzes they passed. Two examples of this type of response were "I had absolutely no confidence in English, but this class really made me feel I can read because I could read a lot at my level. My confidence went up" (S20), and "It was difficult at the beginning, but I gained confidence the more I read. Passing the quizzes gave me confidence" (S73). These examples indicate that both reading and taking the online quizzes positively influenced learners' confidence. The novelty factor of the online reading class was also positive factor to learners, with fourteen (n=14) describing this style of class as a new and unique experience. An example of this kind of response was, "it was a new style class, I really haven't had the chance to read English books, so I thought this was a good experience for me" (S80). The next most frequently provided response was "other transformation" (n=13), which describes other types of personal transformation that occurred in learners beyond the changes in improvement and confidence described above. Such transformations included an increased interest in reading: "I tried hard to get the word count I needed, but I found I became more and more interested in the books and reading the more I read" (S179), or an increase in interest in English in general: "At first I didn't want to do it, but after reading some books, now I feel I'm not so bad at it" (S44). The next most frequent response was "learning appeal" n=12, with learners describing a positive impression of how the class appealed to their learning style preferences. An example of this kind of response was: "I thought this was a good way to learn, on my own and naturally" (S185). Similar, but more focused on the general class organization, were responses in the "class style" (n=10) category. A sample of this kind response was: "Reading on my own and taking tests, and passing the tests online, was really interesting"(S32). Some students positively perceived the value of texts in promoting specific skills (n=8), as seen in this response from Student 78: "I saw words I didn't know over and over so I thought I learned them well". The tenth most frequent response type was "opportunity"

(n=8). This category included responses that described using graded readers as an opportunity or chance to learn English through reading. An example of this type of response was "I've wanted to read more in English, so this was a good opportunity for me experience reading and learning English in a different way" (S162), and "I like reading, so this was a good chance for me to study English while reading" (S79). A number other positive responses (n=22) were provided, including the ability to read exclusively within one's range of interests, the perceived utility of reading for general English abilities, and the inherent challenge posed by words count goals.

Table 4: Open-ended item 1: Summary of positive & negative responses

Positive (n=149)	**Negative (n=27)**
improvement n=22	Difficult n=15
level choice n=21	Didn't like class styles: n=7
enjoyment: n=21	No interested in, don't like, English 5
confidence: n=18	
novelty n=14	
personal transformation n=13	
learning appeal n=12	
class style n=10	
promote specific skills n=8	
opportunity n=8	
other positive responses n=22	

There were comparatively fewer negative responses (N=27) to the first item. The most common type of negative response came from those who found the graded readers difficult (n=15). Examples of this sort of response included "I'm not interested in reading in English so it wasn't interesting for me, reading those books was difficult" (S110), and "It was too difficult to read every week" (S135). The second most frequent (n=7) type of negative response came from those who didn't like the class style. An example of this type of response was, "This kind of class was a pain, I'd prefer a normal class more" (S22). The third type of negative response came from those who had no interest in, or disliked, studying English (n=5). These feelings extended into the use of graded readers, as seen in this response from Student 27, "I don't really like English so I didn't like doing it (*reading and the online quizzes*) at all".

Preferred graded reader types

The second open-ended item asked students which types of books they preferred using. Participants identified readers they liked according to their particular content features, genre, structural or lay-out characteristics, and publisher type or series (see Table 4). The five most frequent responses from each category will be discussed below.

The most frequently identified type of reader preferred was that which had content features that appealed to learners. Students particularly liked books that they perceived to be easy (n=38). Students also identified readers that matched their personal interests as being particularly appealing. Students mentioned graded readers with stories or themes involving such topics as soccer, opera, chess, and airplanes as being particularly appealing due to their appeal to their specific interests. The third most frequently cited content feature that appealed to learners was familiarity in terms of story content. With such responses learners mentioned particularly liking reading stories they already knew such as Huckleberry Finn or Sherlock Holmes as it was easier for them to self-monitor their understanding of the story. The next most frequently cited content features liked by learners were daily life (n=7) and understandability (n=7). Regarding the former, daily life content was described as stories which describe day-to-day activities such as work or school in other countries. The latter, understandability, described storylines, particularly character interactions, that were easy to follow.

Table 5: Open-ended item 2: Attributes of preferred readers

Content features (n=124)	**Genre (n=79)**	**Characteristics (n=36)**	**Publisher (n=11)**
easy (n=38)	movie (n=20)	pictures (n=13)	Foundations (n=7)
matched interests (n=28)	fiction (n=12)	short (n=6)	MacMillan (n=2)
familiar (n= 22)	mystery (n=11)	word count (n=5)	Penguin (n=2)
daily life (n=7)	non-fiction (n=8)	long (n=4)	
understandable (n=7)	biographies (n=5)	variety (n=4)	
famous (n=6)	fantasy (n=4)		
dialogues (n=5)	traditional (n=4)		
moving (n=5)	history (n=4)		
funny (n=4)	Japanese (n=3)		
good flow (n=2)	thriller (n=3)		
	science fiction (n=3)		
	romantic (n=2)		

Genre was the second most frequently cited attribute of graded readers contributing to their likability. Movie-related readers (n=20) were the most popular with students, with a number indicated that they liked being able to check comprehension and compare movie-based graded readers with movies they had or previously watched, or alternatively, watch movies after reading to check their comprehension. The most frequently cited genre was fiction (n=12), with students explaining that they liked following stories and their plots. This was followed by mystery-themed graded readers (n=11), with which learners expressed a keen interest in trying the solve the mystery as they read. The fourth most popular genre was non-fiction (n=8). Within this category learners described books about real places, businesses and events as particularly as valuable in providing knowledge. The fifth most preferred genres was biographies (n=5). Learners expressed interest and excitement in reading details about famous people's lives. Like the non-fiction books, the biographies appeared to appeal in terms of their inherent interest and in providing factual knowledge.

Participants also described preferred graded readers in terms of their specific layout or design features, termed here as "characteristics". A number of students (N=13) identified pictures or illustrations as playing an important role in influencing their degree of enjoyment with books. Student 87 even went as far as identifying what they perceived to be optimum number of pictures a graded reader should have, "…if there were pictures every two pages or so, it really made the book more interesting; I could use the pictures to imagine the story". Another important characteristic was length, with both short (n=6) and long (n=4) books appealing to different students. Those who liked short books liked being able to reading them quickly and effortlessly, and being able to complete their quizzes easily on the Moodle Reader system. Those who preferred longer readers described enjoying following the flow and development of more drawn out stories and characters. A number of participants also identified the printed word count (n=5) on the backs of books as a characteristic that contributed to their enjoyment of graded readers. Such students explained that by choosing books according to their word count allowed them to set weekly goals and read according to their own schedules. A final characteristic positively affecting students impressions of readers was their variety (n=4); that is their distinct visual appeal and presentation from book to book, series to

series, and publisher to publisher. Students who identified this characteristic described enjoying going to the library and choosing from a wide variety of book covers and surveying the layout, content and presentation of readers prior to selection.

A number of students also identified preferred books by specific publishers. The most popular books type in this category were those in the Cengage Foundations series (n=7). Graded readers from other publishers specifically identified by learners were those from MacMillan (n=2) and Penguin (n=2). Where graded readers from these specific publishers were identified, participants did not add any explanatory insights into why such series were preferred, although it is likely that such books represented the preferred content features, genres and characteristics identified above.

Disliked graded reader types

The third open-ended item asked participants what types of graded readers they disliked. Three of the same categories as above emerged, although with a slightly different order of frequency: content features (n=54), reader characteristics (n=34), and genres (n=24).

The content characteristic most frequently cited as having a negative effect on learners' perception of graded readers was "hard to follow" (n=20). Learners explained that readers with storylines that were difficult to follow, had too many characters, or dialogue that was hard to attribute to specific characters, contributed to negative impressions of particular readers. The second most cited disliked reader characteristic was "difficult" books (n=17). A number of learners explained that they didn't like books that were more difficult than they anticipated, and felt frustrated when this difficulty resulted in them not being able to pass the reader's online quiz. Another characteristic that negatively influenced learners' impressions of particular graded readers were those that were perceived as being "dark" (n=7). Dark stories were described those as being violent, morbid, or depressing. An equal number of participants (n=7) disliked readers they perceived to be "uninteresting". Such students explained that both readers that did not match their own interests, as well as those

seemed dull, were particularly disliked. Unfamiliarity was another characteristic that negatively influenced learners' perception of particular readers. Students explained that a lack of familiarity with particular stories and situations made it more difficult to contextualize and follow some stories.

Table 6: Open-Ended Item 3: Attributes of disliked graded readers

Content Features (n=54)	**Characteristics (n=34)**	**Genre (n=24)**
hard to follow n=20	insufficient pictures n=9	biographies n=5
difficult n=17	short / low level n=9	history n=4
dark n=7	long n=8	non-fiction n=4
uninteresting n=7	tight layout n=7	mystery n=3
unfamiliar n=3	too many pictures n=1	traditional n=3
		horror n=3
		romance n=2

Learners also disliked graded readers with layout or design characteristics which they viewed negatively. Within this category the most disliked feature (n=9) was graded readers which did not contain pictures. Participants who disliked such books explained that they were harder to engage and follow without pictures or illustrations related to the story. Receiving the same number responses (n=9) were graded readers which were too easy or too short. Students who disliked this kind of graded reader explained that such books were so underdeveloped, and had such low word counts, that they were perceived to have essentially of no real value. A similar number of students (n=8) identified long books as being among those they disliked. Reasons cited for this were the difficultly in staying focused over the length of longer books, and the difficulty in passing their tests in the online quizzes. A further characteristic of books that was evaluated negatively was "tight layout"; readers with lines were perceived to be too close together. Participants explained that books with such a layout were hard on their eyes and difficult to read.

Participants also described a dislike for graded readers of particular genres. The most frequently cited disliked genre was biographies (n=5), which some learners described as not being as well-developed or interesting as fiction. These same reasons were also cited by a number of students who disliked historical (n=4) and non-fiction

(n=4) genres. In both cases, several learners also described preferring fiction. Other genres identified as disliked were mystery (n=3) due to the difficulty of following some of the stories, traditional stories such as fables and folk tales (n=3) due to their uninteresting stories, and horror stories (n=3) due to their dark or unsettling content.

Discussion

The first goal of this study was to evaluate how the use of graded readers and the Moodle Reader module affected learner motivation. The overall positive endorsement across each of the adapted IMMS scales indicated that the readers and the online graded reader course were viewed positively by participants. As these scales represent major cognitive variables contributing to motivation, this result is a positive indication that learners' motivation likely benefited from using these instructional materials and this course design. A particularly encouraging finding within the scales was the high endorsement of the confidence items. This endorsement, combined with students' strong preference for easy books as revealed in the open-ended item results, suggests that self-selection of books according to self-perceived ability supported students' learning confidence. Self–efficacy is a key component for initiating and sustaining learner motivation in that learners who think they will be successful are more likely to initiate and carry through with positive learning behaviors (Pintrich & Schunk, 2002). Self-selected graded readers appear to engender confidence in learners, and for this reason alone should be recommended for use with this group of learners. As a number of studies have indicated low levels of confidence in Japanese EFL learners (see Johnson 2009), this finding represents an important direction in facilitating more positive attitudes and behaviors in the EFL classroom.

The second goal of this study was to identify how learners perceived using the graded readers and the online evaluation system. Speaking directly to this question, the results of first open-ended item indicated that almost three quarters of learners perceived the course positively. While a variety of explanations were provided for these positive impressions, the most frequently cited reasons were improvement, level choice, enjoyment, and novelty. Learners felt they improved in reading, or in their overall

English ability, through taking this course, a positive outcome that aligns with other studies (Bell, 2001; Constantino, 1995; Horst, 2005; Horst, Cobb & Meara, 1998). Other students cited the self-selection of reader level as a positive aspect of the course. Not only does this ensure a comfortable proficiency level of instructional materials for learners, but it also provides learners' with investment, or stake, in the learning process. Students also cited a general feeling of enjoyment as a reason for liking the course. Such responses suggest that graded readers may be a means of promoting more intrinsically-oriented motivation in learners. Particularly considering Japanese engineering students more extrinsic, instrumental or utilitarian orientations towards English studies (Kimura, Nakamura & Okumura, 2001), this finding may suggest that specific types of instructional materials may have a positive influence motivational orientations. A further positive attraction of the course cited by learners was its novelty appeal, with a number of learners citing the uniqueness of this learning experience as appealing. As most of the learners' prior EFL learning experiences were characterized by traditional teacher-centered classrooms, their willingness to embrace a more student-centered and autonomous learning approach is an encouraging outcome.

The final goal of this study was to identify which types of graded readers learners liked and disliked using. The number of types of graded readers identified as being "liked" was over twice as many as those "disliked". This finding provides some important insights into learner preferences. First, the range of responses, with 30 specific types identified across four thematic areas, speaks to the variability of preferences in learners. This range demonstrates that EFL programs utilizing graded readers need a wide selection of titles in order to meet the varying interests and learning style preferences of learners (Day & Bamford, 1998; Murphy, 1987). Regarding the specific types of graded readers learners liked and disliked, it was observed that content, genre and layout characteristics were important in determining learner preferences. In both positive and negative evaluations, content types were cited most frequently, with "easy" books being liked, and "hard to follow" or "difficult" books being disliked. This general preference for easier books aligns well the general goal of extensive reading approaches, which is to have learners embrace books that are easy to read and which are effortlessly assimilated (Day & Bramford, 1998). Additionally, returning to the

discussion of confidence above, reading easier books is a good way for Japanese EFL learners to regain, or develop, confidence in English learning. The findings above speak to the importance of providing learners with guidance in selecting graded readers appropriate to their level; participants voiced displeasure with inadvertently chosen books that turned out to be too difficult, or in some cases too easy, for them. More specific directions on how to choose appropriately-levelled readers would likely promote confidence and lessen such frustration in learners.

Learners also identified preferred graded readers by genre. The range of genre types liked (n=12), and disliked (n=7), which were at times conflicting, are yet another indicator that a broad range of readers need to be acquired to meet the array of preferences in learners. This is also true of learner preferences in regard to graded reader types characterized by their layout characteristics. Learners variously identified preferences and dislikes of reader types according to their having pictures or not having pictures, being short or too short, and easy or too easy. These conflicting preferences and dislikes suggest that a wide range of graded reader series with different layout characteristics from a number of different publishers is necessary to appeal to the conflicting preferences in learners.

Conclusion

This study revealed a number of benefits associated with the use of graded readers in conjunction with the Moodle Reader Module. The overall positive endorsement of GR-IMMS satisfaction, confidence, relevance, and attention scales indicated that the use of graded readers and the online evaluation system appealed cognitively to learners in a manner that supported motivational engagement. The open-ended items supported these findings with learners expressing satisfaction with the improvement they achieved in the course, greater confidence from using self-selected readers according to perceived proficiency levels, increased perceived relevance derived from selection of content congruent with personal interests and learning style preferences, and heightened attention due to a combination of factors including the novelty of learning and engaging English in new manner. Combined, these findings suggest that graded readers and

autonomous online evaluation provided this sample of Japanese engineering students with a motivating EFL learning experience.

Despite these positive findings, the limitations of this study need to be acknowledged. The situation-specific nature of evaluating learners' motivational orientations toward a particular set of instructional materials or a specific course design may limit the generalizability of the results. For more generalizable findings, a broad multi-institutional study would need to be conducted. Those interested in examining how their own learners might respond to a similar course would be urged to pilot a course and conduct an independent retrospective evaluation of the materials and course design used.

The benefits of using graded readers and autonomous online evaluation systems such as the Moodle Reader Module provide a ray of hope for those in search of curricular alternatives for reluctant EFL learners such as Japanese engineering students. Through expanded use and further empirical inquiry it is hoped that these materials and approaches will demonstrate their potential as a source for motivating EFL learners.

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Appendix 1

Part1: Graded Reader IMMS Items and Scales

Confidence
CON1: When I looked at the books, I had the impression that they would be easy.
CON2: The books were more difficult than I would like.
CON3: The more I read, the more confident I became with reading in English.
CON4: I could not understand many of the books I chose.
CON5: Choosing books at my level gave me confidence.
CON6: Reading the books gave me confidence in my overall English ability.
CON7: Passing the quizzes gave me confidence.

Attention
ATT1: The books are eye catching.
ATT2: The content of the stories helped hold my attention.
ATT3: The books were so difficult to understand it was hard to keep my attention.
ATT4: The books were dry and unappealing.
ATT5: The leveling of books helped me focus my attention.
ATT6: The content of the books helped stimulate my curiosity.
ATT7: There was not enough variety in the books available.
ATT8: I learned something interesting while reading.
ATT9: The variety of books helped keep my attention.
ATT10: Choosing books that interested me helped focus my attention.

Relevance
REL1: The content of the books were relevant to my interests.
REL2: The graded readers are worth reading.
REL3: I could relate the content of the books to things I have seen, done, or thought about in my own life.
REL4: The English content of the books will be useful for me.
REL5: I learned some valuable things reading the books.
REL6: The books were not relevant to my needs.
REL7: The content of the books is valuable.

Satisfaction
SAT1: Completing the books gave me a feeling of satisfaction.
SAT2: I enjoyed the books so much I would like to read more in the future.
SAT3: I really enjoyed reading the books.
SAT4: It was a pleasure using the online learning system.
SAT5: It was satisfying watching my word count rise.
SAT6: Passing the quizzes gave me a feeling of satisfaction.

Part 2: Open-Ended Items

1. How did you feel about using the graded readers in this class?
2. What types of books did you enjoy reading? Why did you like them?
3. Where there any types of books you did not enjoy reading? Why did you dislike them?