

**GOING SOLO: CASE-STUDIES OF LEARNERS GRAPPLING
WITH SELF-INSTRUCTED CALL**

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PhD Thesis

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ABSTRACT

This thesis reports on an investigation of the use of commercial computer-assisted language learning (CALL) programs marketed for self-instruction (i.e. learners working with CALL programs alone, without teacher, classroom, or institutional support). To better understand learning in this context, I conducted 11 case-studies using a primarily qualitative, multi-method design, employing diaries, interviews, observations, and online tracking. Working with one of two commercial CALL programs in one of six languages, the participants logged a total of 96 learning sessions and approximately 75 hours of study between October 2007 and July 2008. Overwhelmingly, participants were disappointed with their CALL programs, and many chose to drop out of the study earlier than planned. Three research questions were proposed for the purposes of this study:

1. What are the experiences of learners working with commercial CALL programs marketed for self-instruction?
2. What common themes emerge as most relevant to shaping these experiences?
3. What are the pedagogical implications of the learners' experiences for CALL theory and program design?

In answer to research question 1, I created case files for the participants, bringing together all of the data collected through the various methods. These case files describe each individual participant's experience from inception to conclusion, highlighting the positive and negative aspects that had the greatest bearing on the final outcomes on a case by case basis. In answer to research question 2, I adopted a grounded theory approach to data analysis and identified five key themes as being most relevant across the entire group of 11 participants (i.e. need for increased self-discipline, dealing with technical problems, encountering ambiguity, working outside the program, and questioning the program's ability to teach). In answer to question 3, I used a framework of five criteria for evaluating CALL materials to discuss the key themes in terms of their impact on learner experience with self-instructed CALL and their pedagogical implications for CALL theory and program design. The framework, modified from Chapelle (2001b) addresses issues of learner fit, authenticity, practicality, construct validity, and impact. Pedagogical implications highlight suggestions for improvement and directions for future research and development.

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CHAPTER 1: Introduction

1.1 Statement of the problem and research gap

Benson (2001:131) describes self-instructed language learning as “the situation in which learners study languages on their own, primarily with the aid of ‘teach-yourself’ materials”. These materials are sold in packages containing, traditionally, a course book and audio cassettes/CDs or, with the advent of a more computer-savvy public, computer-assisted language learning (CALL) software. Selling for as much as £229/package, these programs are big business and there is money to be made. However, once the money has changed hands, how alone is the lone learner? “Anecdote has it that [self-instructed learners] face a hard, lonely task with a high drop-out rate, especially if they live outside the country where the language is used” (Jones 1993:453). Yet, “[r]emarkably few empirical studies...have been done into self-study, i.e. learners’ use of conscious strategies to teach themselves a foreign language...without classroom or institutional support” (Jones 1993:453), and as a result, “much of its justification has to come indirectly: from general language acquisition theory or from classroom-based research” (Jones 1994:441). It appears that, despite these materials constituting “a significant sector within the foreign language-teaching industry as a whole, little research on the effectiveness of self-instruction has been carried out” (Benson 2001:131-132). Moreover, in contrast with materials intended for the classroom, “those intended for home-study are less exposed to critical scrutiny, the market in them taking place directly between the publishers and potential learners, with no teachers or curriculum planners in between” (Roberts 1995:513). Consequently, within the self-instruction industry, there seems to be “a strong and repeated tendency for the introduction of some new technology...to be accompanied by a retrograde and unreflecting pedagogy” (Gremmo and Riley 1995:153).

Furthermore, while it has been argued that a high degree of autonomy is essential to successful self-instruction (Benson 2001; Jones 1994), it would be a mistake to conflate the two concepts (Holec 1988). While self-instruction, as described by Benson (2001), implies transferring teaching responsibilities from a human teacher to self-instruction materials (i.e. Levy’s (2000) computer-as-tutor model), autonomy has been defined as “the ability to take charge of one’s own learning” (Holec 1981:3). Crucially, Holec’s idea of “taking charge” must go beyond

simply purchasing some CALL software online; rather, it must be a constant imperative in every learning activity. And while successful self-instruction is said to be reliant on a high degree of autonomy, research has shown that a high degree of autonomy is reliant on a number of learner variables, among which metacognitive knowledge (Wenden 2001) and learner beliefs (White 1999) are often cited. Developing the knowledge and beliefs necessary for increased autonomy takes time and careful reflection, a process that can be supported by a teacher or learning program (Benson 2001); yet it has been found that “[s]elf-instructional materials...appear to do little to foster autonomy among their learners” (Benson 2001:132).

Egbert (2005, in Figura and Jarvis 2007:449) defines CALL as “learners learning language in any context with, through, and around computer technologies.” With the advance of multimedia technologies, such as interactive video and speech recognition software, self-instructed CALL is becoming a popular alternative to more traditional self-instruction materials. Significantly, CALL programs, with their multimodal capacity to incorporate text, sound, images, and video all at the click of a button, have the potential of being more interactive, more appealing, and more effective than other self-instruction materials. However, while there is an ever-growing body of research on CALL used within institutional contexts (Murday *et al.* 2008; Murray 1999a, 1999b; Stracke 2007; Ushida 2005), empirical research on learners working outside supported contexts is scant, likely because these learners are, by definition, difficult to locate. Similarly, while there is a strong tradition in applied linguistics of research on learner autonomy, this field of inquiry tends to focus on classroom research, investigating how teachers can support learners in attaining greater autonomy (Cotterall 1995; Crabbe 1993), rather than looking at learners working outside of the classroom context. It is to this gap in the research that I direct the present study.

1.2 Overview of the present study

The study described in this thesis is an investigation of the use of commercial CALL programs marketed for self-instruction (i.e. learners working with CALL programs alone, without teacher, classroom, or institutional support). To better understand learning in this context, I conducted 11 case-studies using a primarily qualitative, multi-method design, employing diaries, interviews, observations, and

online tracking. Working with one of two commercial CALL programs in one of six languages, the participants logged a total of 96 learning sessions and approximately 75 hours of study between October 2007 and July 2008. Overwhelmingly, participants were disappointed with their CALL programs, and many chose to drop out of the study earlier than planned. Three research questions were proposed for the purposes of this study:

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In answer to research question 1, I created case files for the participants, bringing together all of the data collected through the various methods. These case files describe each individual participant's experience from inception to conclusion, highlighting the positive and negative aspects that had the greatest bearing on the final outcomes on a case by case basis. In answer to research question 2, I adopted a grounded theory approach to data analysis and identified five key themes as being most relevant across the entire group of 11 participants (i.e. need for increased self-discipline, dealing with technical problems, encountering ambiguity, working outside the program, and questioning the program's ability to teach). In answer to question 3, I used a framework of five criteria for evaluating CALL materials to discuss the key themes in terms of their impact on learner experience with self-instructed CALL and their pedagogical implications for CALL theory and program design. The framework, modified from Chapelle (2001b) addresses issues of learner fit, authenticity, practicality, construct validity, and impact. Pedagogical implications highlight suggestions for improvement and directions for future research and development.

1.3 Overview of the thesis chapters

This thesis is organised into seven chapters. Chapter 1 provides a statement of the problem, identifies the research gap, and presents overviews of the present study and the thesis chapters. Chapter 2 consists of a review of the literature relevant to an understanding of self-instructed CALL as experienced by the 11 case-study participants. This review covers two broad themes: learner experience in self-

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instructed contexts and CALL. Chapter 3 provides a description and justification of the research methodology used in the study. This chapter also contains a brief discussion of the pilot study, which served to inform the methodology of the main study. Chapters 4, 5, and 6 present the findings of research questions 1, 2, and 3 respectively. Chapter 7 finishes with a summary of the main conclusions of the study, a discussion of limitations, and directions for further research.

CHAPTER 2: Literature Review

2.1 Introduction

This chapter presents a review of the literature relevant to an understanding of self-instructed CALL as experienced by the 11 case-study participants. The literature review can be divided into two broad themes. The first theme relates to learner experience in self-instructed contexts: self-instruction and autonomy (fostering autonomy, metacognitive knowledge, learner beliefs and the locus of control, role of the materials in fostering autonomy); motivation (mainstream motivational psychology, motivation in SLA, demotivation); learner attributes (personality, learning preferences); and learner experience in related self-instructed and CALL contexts. The second theme relates to CALL: conceptions of CALL; CALL effectiveness research; CALL evaluation.

2.2 Self-instruction and autonomy

A widely-accepted and oft-quoted definition of self-instruction comes from Dickinson (1987:5), who uses this term “to refer to situations in which a learner, with others, or alone, is working without the direct control of a teacher”. Dickinson (1987:11) makes a distinction between self-instruction and autonomy, where the latter refers to situations in which

the learner is totally responsible for all the decisions concerned with his [sic] learning and the implementation of those decisions. In full autonomy there is no involvement of a ‘teacher’ or an institution. And the learner is also independent of specially prepared materials.

In contrast, Holec (1981:3) has defined autonomy as “the ability to take charge of one’s own learning”, calling into question whether autonomy should be regarded as a behaviour (as per Dickinson’s definition) or a capacity (as per Holec’s definition) (Little 2003). Nonetheless, by these definitions, an example of an autonomous learner is one who either structures or is able to structure her/his own learning activities independently. S/he may do this by making use of authentic texts such as magazines, newspapers, or movies in the second/additional/foreign language (L2), or traveling to L2 destinations to learn *in-situ*. In contrast, an example of a self-instructed learner is one who works independently on homework assignments, finds a language study-buddy, or follows the syllabus of a self-instructed CALL program. Dickinson goes on

to distinguish between learner-centered and materials-centered self-instruction, where the former refers to situations in which the learner is responsible for making decisions regarding her/his overall learning, and the latter refers to situations in which such decisions are made largely by the materials. Jones (1998) further distinguishes between broad and narrow self-instruction. In the broad sense, he adopts the definition offered by Dickinson. In the narrow sense, Jones (1998:378) refers to “a deliberate *long-term* learning project instigated, planned, and carried out by the learner alone, without teacher intervention” (italics added). Although many different tasks arguably fall within the broader scope of self-instruction (e.g. homework, student-led group work), it is the narrow scope of self-instruction referred to by Jones (1998:378) as “teach-yourself, i.e. solo instruction led by the syllabus of a language-learning package” that is of key interest here. In keeping with these distinctions, the context of the present study falls within the materials-centered narrow definition of self-instruction. However, because successful self-instruction is said to be dependent on a high level of learner autonomy (Benson 2001), a discussion of autonomy is useful to provide insight into this area and better understand self-instructed CALL as experienced by the 11 case-study participants.

Autonomy is believed to be desirable in L2 learners for three main reasons: autonomous learners are more engaged in their learning, which enhances efficiency and effectiveness; autonomous learners are motivated learners, and have an enhanced capacity to overcome setbacks (see below for a more detailed treatment of motivation); and within language learning, where successful outcomes depend on extensive L2 usage, autonomous learners are more likely to seek opportunities for practice outside formal learning contexts (Little 2003). The literature on autonomous language learning identifies three main challenges inherent to this context: planning (e.g. determining needs, setting goals); monitoring (e.g. tracking progress, addressing difficulties); and evaluating (e.g. comparing actual outcomes with set goals) (Wenden 1998, 2001; see also Dickinson 1987).

2.2.1 *Fostering autonomy*

Because “[a]utonomy does not just ‘happen’; its implementation needs to be planned and prepared carefully” (Kohonen 1991:108), many researchers (Benson 2001; Cotterall 1995, Crabbe 1993; Hurd *et al.* 2001; Murphy 2008; Wenden 1995) believe it is the teacher’s responsibility to foster autonomy in her/his students, what

Little (2003:¶5) terms “autonomization”. Research on fostering autonomy has focused on: developing the learner’s metacognitive knowledge (e.g. learning styles, strategy training) (Chamot 2001; O’Malley and Chamot 1990, Oxford 1989; Victori and Lockhart 1995, Wenden 1995, 1998; White 1995); addressing learner beliefs regarding language learning (which may influence the learner’s readiness for autonomy) (Cotterall 1995; White 1999); and the role of teachers and materials in fostering autonomy (e.g. provision of learner preparation and support) (Cotterall 1995; Crabbe 1993; Hurd *et al.* 2001; Murphy 2008). The following is a brief review of some important research addressing these issues.

2.2.2 *Metacognitive knowledge*

While cognitive knowledge consists of what we know, metacognitive knowledge consists of what we know about what we know. Flavell and Wellman (1977, in Wenden 1998:516) define metacognitive knowledge as “the relatively stable information human thinkers have about their own cognitive processes and those of others”. Metacognitive knowledge allows learners to move from passive receptacles of knowledge to active participants in their own learning (Paris and Winograd 1990, in Wenden 1998). Within language learning, there are three main types of metacognitive knowledge: person knowledge (i.e. how factors such as age, gender, aptitude, and personality affect learning); task knowledge (i.e. the nature and purpose of particular tasks); and strategic knowledge (i.e. what strategies are, how and when to employ them) (Wenden 2001). Strategic knowledge is arguably the most investigated type of metacognitive knowledge (Wenden 1995), and has been found to include thoughts, behaviours, and techniques that the learner uses to help her/him understand, process, retain, and apply new knowledge (O’Malley and Chamot 1990). Developing metacognitive knowledge as a way to foster autonomy has focused on awareness-raising using introspection techniques (e.g. counselling, reflective journaling) (Victori and Lockhart 1995; Murphy 2008) and strategy training (Chamot 2001; O’Malley and Chamot 1990, Oxford 1989; Wenden 1995). For example, early studies looking at the strategy usage of successful language learners led to conceptualizations of “the good language learner” (Rubin 1975), who is characterized as “an active learner, [who] monitors language production, practices communicating in the language, makes use of prior linguistic knowledge, uses various memorization techniques, and asks questions for clarification” (Chamot 2001:29). However, strategy training research ultimately

caused a split between those who believe the strategies used by successful language learners can be captured and taught to less successful learners (Naiman *et al.* 1978), and those who believe that strategies cannot simply be transferred from one learner to another, because implicit in strategic knowledge is the knowledge of what works best for each individual (Norton and Toohey 2001).

2.2.3 *Learner beliefs and the locus of control*

To distinguish metacognitive knowledge from learner beliefs, Wenden (2001) describes the latter as a subset of the former, and characterizes them as being idiosyncratic, value-laden, and more tenaciously held by the learner. As in the case of metacognitive knowledge, addressing learner beliefs as a way to foster autonomy in the L2 learner has focused primarily on awareness-raising using introspection techniques (e.g. counselling, reflective journaling) (Victori and Lockhart 1995; Murphy 2008).

A key construct of learner beliefs is the locus of control, which refers to “the orientation of an individual towards what determines their success or failure” (White 1999:452). The locus of control can be situated either internally or externally, so that learners may credit outcomes to internal factors (e.g. effort, ability, enjoyment) or to external factors (e.g. materials, difficulty, luck) (Chang and Ho 2009; Williams *et al.* 2004) (crediting outcomes to internal or external factors relates to attribution theory, and is described in more detail within the discussion on motivation below). The tendency to internalize or externalize control may ultimately belie a learner’s readiness for autonomy. Arguing that not every L2 learner is necessarily prepared for the increased responsibility autonomy entails, Cotterall (1995) identifies types of learner beliefs that may directly enhance or inhibit success in this context, including: role of the teacher, role of feedback, learner independence, learner confidence in study ability, and language learning experience. Cotterall argues that learners who view the teacher as an authoritative figure, responsible for providing feedback and setting goals (i.e. externalizing control) are less suited to autonomous learning than those who view the teacher as a facilitator, and those who are able to obtain feedback from a variety of sources and set their own goals (i.e. internalizing control). Moreover, experienced L2 learners who self-identify as good L2 learners are better suited to autonomous learning than inexperienced learners and those who lack confidence in their ability

(self-identifying as a good or bad L2 learner relates to self-efficacy theory, and is described in more detail within the discussion on motivation below).

2.2.4 *Role of the materials in fostering autonomy*

In the classroom context, many researchers (Benson 2001; Cotterall 1995, Crabbe 1993; Hurd *et al.* 2001; Murphy 2008; Wenden 1995) believe it is the teacher's responsibility to foster autonomy in her/his students. However, it has been argued that in teacherless language learning contexts (e.g. self-instruction, distance learning), "the responsibility for 'autonomization' rests largely with the teaching/learning materials and depends on the commitment of course designers and writers to this goal" (Murphy 2008:84). Rowntree (1990, in Benson 2001:133) views the role of the materials in such contexts as central, arguing that "[t]he materials must carry out all the functions a teacher or trainer would carry out in the conventional situation". Nonetheless, this stance is not taken by all materials developers, leading some researchers to note that "[s]elf-instructional materials...appear to do little to foster autonomy among their learners" (Benson 2001:132). Because research on the role of self-instruction materials in fostering autonomy is largely absent in the literature, I turn to related research looking at distance language learning materials.

In two studies looking at how distance learning materials can support learner autonomy, Hurd *et al.* (2001) and Murphy (2008) illustrate how materials developers can build in opportunities for autonomization through critical reflection and strategy training. Hurd *et al.* describe how transparency within the materials (i.e. providing clear information regarding learning objectives, content, and timing for all activities) can promote learner ownership, enabling learners to plan their learning sessions and prioritize activities based on the time and effort required. To promote critical reflection as a means of metacognitive awareness-raising, the materials can encourage learners to record their thoughts and impressions of various aspects of their language learning. In terms of strategy training, an introduction to language learning strategies and general study skills presented separately from the activities can be included, while suggestions for specific strategies can be integrated alongside activities where they may be most useful. To promote self-evaluation, activities can include model answers and answer keys, as well as end-of-unit opportunities for extra practice. In conjunction with many of these recommendations, Murphy (2008:92) adopts a constructivist approach in highlighting the need for a "pedagogic dialogue" to

promote critical reflection, as opposed to positing reflection as a solitary act. Within this approach, the materials address the learners directly and encourage interaction by guiding them through the activities via a system of “scaffolded” support. Murphy likewise stresses the importance of building in opportunities for learner-based decision-making, such as: providing clearly marked optional activities (which learners can choose to skip or complete based on need, interest, or time available); providing individualized routes through the materials (which learners can choose from based on learning needs and goals); and providing individualized assessments (to best suit learning needs and goals). As well as fostering autonomy, opportunities for learner-based decision-making and learner control have been found to increase self-efficacy and motivation (Chang and Ho 2009; Murphy 2008) (see below for a more detailed treatment of self-efficacy theory and motivation).

Design issues related to the role of the materials in fostering autonomy include implicit vs. explicit and contextualized vs. decontextualized learner support. Murphy (2008) notes that the trend in materials design is to move away from implicit support towards more explicit support. For example, rather than simply providing a practice activity and an answer key as a means for self-evaluation, many materials now provide explicit advice on how to identify errors and offer clear opportunities to develop self-evaluation skills. In terms of the trend towards using decontextualized study guides to provide language learning advice, Murphy found that the majority of her students either only read the study guide once at the beginning of the course or not at all. Advice that is contextualized within the learning materials seems to improve the accessibility of learner support. Another key issue relates to the way in which advice on critical reflection and strategy training is presented. Materials developers should be wary of using ambiguous language or jargon that may be unfamiliar to the learners (Hurd *et al.* 2001; Murphy 2008). Murphy (2008:89-90) describes how the suggestion “review your learning” was mistaken to mean “see how much you can remember” by some of her students, rather than “[note] how things are going, changes in priorities, general approaches to learning, reactions to activities and how long they take”. Such ambiguous language has been identified as a major obstacle to learning in teacherless contexts (Bidlake 2005; Grace 1998; White 1999) and should be guarded against (see below for discussion of tolerance of ambiguity).

In sum, what Hurd *et al.* (2001) and Murphy (2008) propose is that materials *can* and *should* promote autonomization in their learners through transparent and

supported opportunities for critical reflection, strategy training, self-evaluation, and learner-based decision making. Moreover, it seems as though such opportunities work best when presented explicitly, contextualized within the activities themselves, and without undue jargon.

2.3 Motivation

Although Ushioda (1996, in Dörnyei 1998:124) claims that “[a]utonomous language learners are by definition motivated learners”, not all autonomous learners are motivated for the same reasons, and every learner’s motivation does not manifest itself in the same way. Although motivation has been the subject of a great deal of research and is widely considered to be a powerful determinant of learning outcomes, it remains one of the most difficult to define and comprehend constructs of language learning. Consequently, many researchers argue that existing conceptualizations are overly simplistic (Larsen-Freeman 2001). There is some debate, for example, about whether motivation is a mental state or a process. A frequently cited definition by Williams and Burden (1997:120) suggests it may be both, defining motivation as “a state of cognitive and emotional arousal which leads to a conscious decision to act, and which gives rise to a period of sustained effort in order to attain a previously set goal”.

For the purposes of the present study a discussion of motivation is necessary in order to understand the possible range of orientations and motivations (and demotivations) experienced by the 11 case-study participants. While this study did not set out to investigate motivation in self-instructed CALL, no exploration of learner experience is complete without considering the learner’s motives for learning the L2 and the learner’s reasons for persisting with or dropping her/his L2 studies. Because there is no universally accepted theory of motivation in second language acquisition (SLA) theory, a broader look at the competing and complementary motivational theories proves most useful.

2.3.1 Mainstream motivational psychology

In a comprehensive survey of motivational theories, Dörnyei (1998) identifies three major approaches in mainstream motivational psychology that have influenced views of motivation in SLA: self-determination theory, expectancy-value theories,

and goal theories. These approaches highlight the multi-faceted nature of motivation, drawing on social, personal, and contextual elements.

Introduced by Deci and Ryan (1985, in Dörnyei 1998), self-determination theory asserts the view that human beings have an innate desire to self-direct and self-regulate. This theory re-examines one of the most recognized distinctions in motivation research, that of intrinsic and extrinsic motivation. While a learner with intrinsic motivation is one who is motivated to learn because s/he alone wants to, whether for the pleasure of learning itself or for the pleasure of achievement, a learner with extrinsic motivation is externally regulated, typically by the promise of reward or the threat of punishment. Intrinsic motivation is believed to lead to more effective learning, as it positions the learning context as working with rather than against the learner (Deci and Ryan 1985, in Dickinson 1995). Although intrinsic and extrinsic motivation have often been viewed as antagonistic, self-determination theory posits that extrinsic motivation actually exists on a continuum and that in a self-determined learner extrinsic motivation can co-exist with or even result in intrinsic motivation.

Expectancy-value theories suggest that motivation is a combination of a learner's expectancy of success and the value s/he attaches to that success. Expectancy of success is a combination of past experiences (attribution theory, i.e. the learner's attributions of past success and failure), self-efficacy (self-efficacy theory, i.e. the learner's perception of her/his ability to perform specific tasks), and the preservation of self-worth (self-worth theory, i.e. the learner's need to "save face"). Value is a combination of importance, interest, utility, and cost. Within these theories, motivation is predicted to positively correlate with the combination of expectancy of success and value, so where they are found to be high, so too will motivation be high, and where they are found to be low or lacking, so too will motivation be low or lacking. The constructs that combine to determine expectancy of success are particularly prescient and comprise theories in their own rights. Within attribution theory (Weiner 1986, in Williams *et al.* 2004), what a learner attributes success and failure to (whether internal or external, changeable or unchangeable) can greatly influence future learning endeavors. For example, a learner who attributes failure to low ability (i.e. intrinsic, unchangeable) may experience decreased motivation to continue, whereas a learner who attributes failure to poor materials (i.e. extrinsic, changeable) may maintain previous levels of motivation while looking for more suitable materials. Within self-efficacy theory, a learner's perception of her/his self-

efficacy is domain-specific, so that a learner may have high levels of perceived self-efficacy in terms of language learning, but low levels in terms of self-instruction. Learners who have low levels of perceived self-efficacy in a given task will give up more quickly when faced with difficulties than learners with high levels. Within self-worth theory, Covington (1992, in Dörnyei 1998) describes how learners may engage in seemingly self-defeating behaviours in order to preserve self-worth and “save face” in front of others. For example, a learner may attempt to protect her/his normally high-achieving reputation by procrastinating and leaving exam preparations until the last minute; thus if s/he does poorly, it can be attributed to lack of preparation rather than low-ability without damaging her/his self-worth.

Goal theories comprise both goal-setting theory and goal orientation theory. Goal-setting theory, introduced by Locke and Latham (1994, in Dörnyei 1998), suggests that the act of setting a goal is of utmost importance to the final outcome, and that goals can vary in two crucial ways: specificity and difficulty. Research in goal-setting theory has shown that goals that are specific and difficult result in greater achievement than do unspecific goals, or specific but overly easy goals. Goal orientation theory contrasts two possible orientations that learners can adopt: mastery orientation, wherein the learner is motivated to do well for the sake of learning the material, and performance orientation, wherein the learner is motivated to do well in order to look good in front of her/his peers. Generally, the mastery orientation is thought to be the superior of the two, as it is associated with intrinsic motivation (Ames 1992, in Dörnyei 1998).

2.3.2 Motivation in SLA

Turning to research on motivation in SLA, Dörnyei (1998, 2001) presents several important approaches to understanding motivation as it pertains to the L2 learner and draws connections between these approaches and those from mainstream motivational psychology. For example, applying self-determination theory to SLA, a clear connection exists between the need for self-determination and the goal of learner autonomy, where increased autonomy is precisely reliant on increased self-determination and learner control (Chang and Ho 2009). Thus, teachers who succeed in fostering autonomy in their classrooms may begin with learners who are extrinsically motivated by test scores, but who, through increased self-determination

and autonomy, may ultimately find themselves intrinsically motivated by the enjoyment of language learning and the L2 itself.

Along with the intrinsic/extrinsic dichotomy, another similarly well-recognized dichotomy exists in the motivation literature. Gardner's social psychological approach (1985) suggests that a learner can have one of two distinct orientations towards a task: integrative or instrumental. A learner who is studying the L2 for strong interpersonal reasons, such as a desire to assimilate into a community of first language (L1) speakers, is said to have an integrative orientation, whereas a learner who is studying the L2 for more utilitarian reasons, such as a need to communicate for business purposes, is said to have an instrumental orientation. Crucially, however, these constructs are not types of motivation; rather, they are orientations that lead to motivation, and as Gardner (1985:169) argues "the source of the motivating impetus is relatively unimportant provided that motivation is aroused". However, despite all of the attention it receives, this distinction has sometimes proven to be an artificial one, as a person's orientation may be simultaneously integrative and instrumental (Brown 2004), as with someone who is both learning Spanish in order to assimilate into her fiancé's Mexican family (integrative) and to have the linguistic tools necessary to plan a wedding in Acapulco (instrumental), lending these constructs little explanatory power. Nonetheless, the socioeducational model of SLA (Gardner 1985) from which these orientations arise, does offer an extensive framework within which to understand language learning. This framework suggests that a highly sophisticated interplay of variables ultimately result in learning outcomes, of which motivation is only one of several variables. In this model, motivation plays a central role in mediating the interplay between language attitudes and achievement, so that a learner with negative attitudes towards the target language, target language community, or learning context will have decreased motivation, thus negatively affecting achievement, while positive attitudes will have the opposite effect. Motivation, in turn is sensitive to achievement, with success resulting in increased motivation, and failure often resulting in decreased motivation (Ehrman 1996, in Brown 2004).

Dörnyei's (2001) process model divides motivation into three discrete phases: pre-actional, actional, and post-actional. Each phase comprises activities particular to that point in time within the motivational process. The pre-actional phase builds up to task implementation, and activities include planning, setting goals, and determining

expectancy and value. The actional phase is the task implementational phase, and activities particular to this phase enable the learner to persevere, such as ignoring competing demands for attention, controlling demotivating emotions, and coping with set-backs and failures in constructive ways. The post-actional phase occurs after task implementation, and activities include task evaluation and critical reflection. Using three discrete phases, the process model attempts to illustrate how motivation can fluctuate over the course of a task, rather than existing as a steady state (Hiromori 2009). In this way, an L2 learner may go from being highly motivated during the pre-actional phase to a state of demotivation during the actional phase, or vice versa.

2.3.3 Demotivation

Demotivation is a relatively new area of motivation research, and so far researchers have focused more on identifying demotivating factors than developing conceptual frameworks. Dörnyei (2001) refers to demotivation as a decrease or drop in level of motivation. Falout *et al.* (2009) explain that demotivation is not a distraction, a gradual loss of interest, the result of internal triggers, nor should it be confused with amotivation, which describes the steady state of having no motivation; rather, demotivation is caused by the internalization of an external demotivating factor. In order to investigate the demotivation of Japanese English as a foreign language (EFL) learners via large scale survey methods, Sakai and Kikuchi (2009) first undertook a comprehensive review of research exploring this issue. Based on 15 studies taken from Asian, European, and North American contexts, Sakai and Kikuchi (2009:61) identified six demotivating factor categories: teachers (e.g. teaching competence, style); characteristics of classes (e.g. course contents, pace, monotonous/boring lessons); experiences of failure (e.g. disappointing test scores); class environment (e.g. inactive classes, lessons at inappropriate levels); class materials (e.g. unsuitable, uninteresting); and lack of interest (e.g. sense that English used at school is not practical/necessary). Using a survey to further explore these six categories, they identified the top demotivating factors for participants as being related to disappointing test scores and demotivating class materials, and the least demotivating factors as being related to the teacher's teaching competence and style. In another study conducted in the Japanese EFL context, Falout *et al.* (2009) investigated demotivating factors according to three categories: external conditions of the learning environment (e.g. use of the grammar-translation method); internal

conditions of the learner (e.g. self-confidence); and reactive behaviours to demotivating experiences (e.g. enjoyment-seeking). The results showed that internal conditions and reactive behaviours correlate with long-term EFL learning outcomes. Moreover, beginning learners of low proficiencies were found to be least able to control these internal conditions and reactive behaviours in ways that would produce positive long-term learning outcomes. Falout *et al.* found that more proficient learners responded to challenges by engaging in enjoyment-seeking activities to build self-confidence, while less proficient learners responded by self-denigrating and seeking help from others. These findings illustrate the importance of minimizing demotivation, particularly in beginning learners. Surprisingly, a study by Gorham and Christophel (1992, in Falout *et al.* 2009) found that the absence of demotivating factors in the classroom (e.g. an unenthusiastic teacher) was more successful in reducing demotivation than the presence of motivating factors (e.g. an enthusiastic teacher). These findings suggest that teachers may enhance motivation most effectively by averting demotivation.

Although Sakai and Kikuchi's (2009) and Falout *et al.*'s (2009) research focuses on classroom L2 learners, demotivation is a particularly relevant topic in the self-instruction context, where drop-out is reported to be high (Jones 1996, 1998, Umino 1999). Obvious differences between demotivation in the classroom and self-instruction contexts include the lack of: teachers (which arguably places greater responsibility on the programs with respect to averting demotivation), peers, and regularly scheduled classes. In an investigation of the use of self-instruction foreign language broadcast materials in the Japanese context, Umino (1999) found that reasons for drop-out included: the learner became too busy, the learner prioritized other activities over self-instruction, the learner failed to establish a self-instruction routine, the programs became too complicated, the programs progressed too quickly, and the programs became boring. These reasons for demotivation and drop-out are echoed throughout the literature on self-instructed language learning as well as in the present study and are addressed more thoroughly below in the discussion of learner experience.

2.4 Learner attributes

L2 learners approach language learning from diverse biological and social circumstances, and their experiences are continuously shaped by the sum of their

learner attributes, which include: age, gender, aptitude, personality, learning disabilities, social identities, and learning preferences, among many others (Jones 1996; Larsen-Freeman 2001). In contrast with motivation, which is frequently in flux, learner attributes are fairly steady (or at least change predictably, e.g. age) over time. For the purposes of the present study a discussion of learner attributes is useful to provide insight into this area and better understand self-instructed CALL as experienced by the 11 case-study participants. However, because a comprehensive list of learner attributes is extensive, the scope of this discussion is limited to those of greatest importance to the present study: personality and learning preferences. I have chosen to highlight these two learner attributes at the exclusion of the others because they comprise elements that proved to be central to the learners' experiences in this study. Within personality, tolerance of ambiguity proved to be a key attribute to consider, and within learning preferences, environmental and sensory preferences proved to be significant. While many of these attributes have been dichotomized into contrastive pairs (e.g. introversion-extroversion, low-high tolerance of ambiguity), these pairs should be regarded as ends of a continuum, rather than either/or propositions. Most learners fit somewhere in between the extremes, and all of these attributes interact in complex ways, which manifest differently in different learners.

2.4.1 Personality

Personality refers to the learner's "typical manner of relating to society and information" (Antenos-Conforti 1998:555). Larsen-Freeman (2001) lists various aspects of personality that have been highlighted in the literature, including: self-esteem, introversion-extroversion, anxiety, risk-taking, and tolerance of ambiguity. For example, a widely recognized distinction within personality research is the introversion-extroversion dichotomy. Introversion has been associated with studiousness, and within self-instruction, the introverted learner may adapt better to this solitary context; however, s/he may not be as successful as the extroverted learner, who is more apt to seek out opportunities for spoken interaction, such as conversing with L1 speakers, or finding a study buddy (Jones 1996). For the purposes of this discussion I have chosen to highlight tolerance of ambiguity at the exclusion of other aspects of personality because it proved to be central to many of the learners' experiences in this study.

Ehrman (1993, in Grace 1998:23) defines tolerance of ambiguity as the ability “to hold contradictory or incomplete information without either rejecting one of the contradictory elements or coming to premature closure on an incomplete schema”. For example, an L2 learner’s tolerance of ambiguity may be tested when s/he is presented with unfamiliar L2 input without a definition or L1 translation to which to appeal. In such cases, the learner must infer the meaning of the input based on contextual clues, without any immediate way to verify whether or not s/he is correct. Moreover, the learner may not arrive at a single satisfactory inference, and may have several possible meanings competing for the same L2 input. Until the learner is able to verify the actual meaning, s/he must continue to work with the input, gathering clues about its meaning and testing hypotheses. A learner who is able to do this with ease is said to have high tolerance of ambiguity, and is more likely to persevere with language learning and enjoy more successful outcomes than a learner with low tolerance of ambiguity (Grace 1998). A learner with low tolerance may prematurely commit an incorrect meaning to memory, and may find such ambiguities frustrating and demotivating.

In a study by White (1999), L2 learners new to self-instruction were shocked by the amount of ambiguity they encountered in this context. Learner responses to ambiguity were of three basic types and can be viewed as either adopting an internal or external locus of control: affective responses (internal, e.g. acknowledging feelings, reassuring oneself, adopting a new perspective); engagement (internal, e.g. searching materials, revising, seeking other materials and resources, repetition); and seeking outside support (external, e.g. contacting tutor, peers, native speakers). White concludes that persisting with self-instruction in the midst of so much ambiguity requires patience, endurance, and self-efficacy.

From a design perspective, ambiguity should be avoided as much as possible to support learners with low tolerance. However, even learners with high tolerance can benefit from materials designed to minimize ambiguity. In the CALL context, Grace (1998) found that regardless of tolerance level, all of the learners in her study retained more L2 vocabulary when presented unambiguously with L1 translations, than L2 vocabulary presented ambiguously without L1 translations.

2.4.2 Learning preferences

Learning preferences are a learner's "cognitive, sensory, and environmental needs and preferences for perceiving, processing, and assimilating new information" (Antenos-Conforti 1998:541). Of particular relevance to the present study are sensory and environmental learning preferences. Again, for the purposes of this discussion I have chosen to highlight these learning preferences at the exclusion of others because they proved to be central to many of the learners' experiences in this study.

Sensory preferences refer to the learner's "preferred modes of perception, practice and recollection of information. These are visual, auditory, kinaesthetic, and oral/digital mechanical" (Antenos-Conforti 1998:555). In the CALL context, it is arguably more possible than ever to accommodate the full range of sensory preferences. Through the integration of text, sound, images, and video, CALL programs allow for multi-media and multi-modal presentations of the L2. Moreover, multi-modal presentations have been found to enhance language learning. For example, presenting L2 input both verbally (e.g. a voice speaking the word "dog") and non-verbally (e.g. a picture of a dog) not only accommodates both auditory and visual learners, it also allows for dual-coding, which promotes deep-processing (Paivio 1971).

Environmental preferences refer to the learner's "most suitable/productive physical surroundings, such as lighting, sounds, body positions, and social environment" (Antenos-Conforti 1998:555). In the CALL context, sitting alone at a computer may prove awkward to some learners who prefer more social or active approaches to learning, or who find mouse clicking tedious. Stracke (2007) refers to this problem as the spatial *inflexibility* of CALL, which contrasts with the oft-touted temporal flexibility of self-instruction (Dickinson 1987). Within self-instructed CALL, learners have the freedom to determine *when* and *for how long* to engage in a learning session (i.e. temporal flexibility), but not necessarily *where* to do so (i.e. spatial *inflexibility*), as they are often limited to working at a computer with the necessary system requirements to run the CALL program (see below in the discussion of learner experience for a more detailed treatment of spatial *inflexibility*). Fortunately, this deterrent to CALL is increasingly being surmounted through advances in technology. Hand-held devices such as mobile phones may now be equipped with language learning applications, and L2 audio and video podcasts are now available as mp3s for downloading onto portable media devices.

2.5 Learner experience in related self-instructed and CALL contexts

Because research on learner experience in the self-instructed CALL context is largely absent in the literature, I turn to research examining this experience in related self-instructed and CALL contexts.

Jones (1994, 1995, 1996, 1998) conducted two pioneering investigations of commercial self-instructed language learning. The first was an exploratory self-study of his own acquisition of Hungarian using introspective diaries. The second was a telephone interview survey of 70 self-access learners. Findings from the self-study suggest two phases of language learning. The first phase is “pre-threshold”, during which the learner is dependent on specially prepared packages for self-instruction. The second phase is “post-threshold” and occurs once a lexico-grammatical threshold of acquisition has been crossed, at which point the learner is no longer dependent on special materials. Post-threshold, the learner is able to complement package use with learner-selected authentic materials in the L2 to maintain interest and motivation. Findings also indicate a significant risk of exclusive self-instruction package use as being the lack of real-time listening practice. Jones points out that reading, writing, and speaking opportunities in real-world situations can more easily be slowed down and negotiated by the L2 learner who is struggling to keep up. Listening, however, is more difficult to negotiate without compromising the learner’s position as a competent interlocutor. Findings from the survey of 70 self-access learners indicate that package use may be most useful for learners who are not complete beginners, but who have some previous knowledge of the L2 in question. Findings also suggest that exclusive package use by beginners may be the least successful mode of L2 learning, followed by exclusive classroom learning, while the most successful mode may be classroom learning mixed with self-instruction. Jones accounts for this by citing high drop-out rates for beginners in the self-instruction mode, and the need for more advanced learners to complement their learning with authentic L2 materials to sustain motivation levels.

In his exploration of the CALL experiences of 23 learners using an interactive videodisc program as part of a university-level French as a foreign language module, Murray (1999a, 1999b) adopted a multi-method case-study approach incorporating language learning histories, diaries, video observations, think-aloud protocols, interviews, and pre-/post-tests. He found that this combination of data collection methods yielded a more complete depiction of learner experience than any single

method used alone. In particular, Murray found that methods such as histories and diaries, which asked learners to reflect on their experiences with minimal prompting, often produced scant or unfocused entries. He claimed that “many of the participants were not quite sure what to write about. They did not know which aspects of their experiences were noteworthy” (Murray 1999b:186). To counter this, interviews conducted after the histories and diaries had been collected emerged as an extremely useful way to clarify and expand on gaps in the learners’ narratives. Factors that emerged as salient to shaping the learners’ experiences included: increased freedom to determine pace and learning path, decreased performance anxiety, increased self-discipline required to commit to self-instructed CALL in contrast with classroom learning, and increased real-world verisimilitude of activities afforded by the software’s interactive video design.

These findings are both confirmed and contradicted by findings from Murday *et al.*’s (2008; see also Ushida 2005) investigation of the perspectives of university-level French and Spanish L2 learners who elected to enroll in a “language online” (LOL) module as opposed to an equivalent classroom-based module. Data were collected using module results, learner biographical data, observations, and individual and small group interviews. Contrasting with Murray’s (1999a, 1999b) findings, learners in this study who expected the LOL to afford more freedom in terms of pace and learning path were distraught at the tight schedule enforced by the module leaders. Moreover, whereas Murray’s learners identified increased real-world verisimilitude of activities as a factor relating positively to their experience, Murday *et al.*’s learners cited a decrease in verisimilitude, primarily due to the lack of human interaction. In keeping with Murray’s findings, however, many learners accustomed to classroom learning, where “repeated exposure to the target language...involved little more effort on their part than simply showing up for class” (Murday *et al.* 2008:131), found procrastination to be a frequent issue (Ushida 2005), and the added self-discipline required to regularly engage with the LOL materials to be a huge obstacle to their learning.

Revealing a more extreme position, Stracke (2007:57) cites “rejection of the computer as a medium of language learning” as one of three reasons why learners dropped out of a blended language learning (BLL) module for university-level French and Spanish L2 learners. Of the 32 learners involved in this study, three chose to leave the module early, and Stracke used a case-study design incorporating learner

biographical data and semi-structured interviews to investigate the reasons behind the drop-out. Along with rejection of the computer (for reasons of isolation and lack of human interaction, corresponding with Murday *et al.*'s (2008) study), other reasons cited for drop-out included: lack of connection between the CALL and classroom components of the BLL, and lack of printed materials. The latter, in particular, proved to be a major obstacle to the CALL component. Learners expressed a strong desire to have paper-based materials to complement their CALL activities. Such materials were referred to by the students as “conventional, traditional, and normal” (Stracke 2007:71). Learners expressed wanting to have materials they could carry with them, something to pull out and read on the bus, or even bring to bed. Learners also expressed a need for printed materials for writing practice, stating their preference for writing by hand over typing on a keyboard. This finding is interesting because it contrasts the oft-cited temporal flexibility of self-instructed CALL (i.e. the learner is free to determine *when*, *for how long*, and *at what pace* to learn) with spatial inflexibility (i.e. the learner is restricted to working at a computer, perhaps even a particular computer or computer-lab).

Bordonaro's (2003) study of the perceptions of nine advanced English L2 learners using technology to assist their language learning echoes many of these themes. Using an interview design and a grounded theory approach to analysis, Bordonaro describes the two general categories of learner perceptions that emerged from her study: positive and negative. The former included: convenience (particularly the temporal flexibility introduced in the discussion of Stracke's (2007) study), and safety (corresponding with the lowered performance anxiety referred to in Murray's (1999a, 1999b) study). The latter included: decreased verisimilitude in terms of lack of human interaction (contrasting with the findings of Murray's (1999a, 1999b) study and corresponding with the findings of Murday *et al.*'s (2008) study).

These researchers all investigated learner experience by making use of qualitative, often introspective methods of data collection, such as language learning histories, diaries, interviews, think-aloud protocols, and observations. To afford the learners as much freedom as possible to articulate their own experiences, several of the researchers (Bordonaro 2003; Jones 1994, 1995, 1996, 1998; Murray 1999a, 1999b; Stracke 2007) avoided proposing *a priori* themes and categories. Indeed, these studies underscore what Conole (2008:124) refers to as “listening to the learner voice” in their willingness to allow learners to speak for themselves in identifying the factors

most salient to shaping their CALL experience. This experiential focus is in keeping with a recent shift from learning product to learning process, and is well-precedented in the CALL literature (Jamieson, Chapelle, and Preiss 2005; Ma 2008), where there is a growing appreciation of the immense influence of learner perceptions, perspectives, and attitudes (Bordonaro 2003; Conole 2008; Murday *et al.* 2008; Murphy 2008; Murray 1999a, 1999b; Stracke 2007; Ushida 2005) on learner experience.

2.6 CALL

CALL (computer-assisted language learning) is really an umbrella term under which an ever-increasing array of activities falls, exploiting an ever-increasing variety of tools available to enhance language learning. Egbert (2005, in Figura and Jarvis 2007:449) defines CALL as “learners learning language in any context with, through, and around computer technologies.” Examples of these technologies include: word-processors, e-mail, websites (those tailored to language learners and those providing authentic materials), forums, chat-rooms, virtual worlds, blogs, wikis, games, computer-mediated learning environments, multi-media tools (e.g. digital sound, images, videos), file sharing sites, concordances, electronic dictionaries, encyclopedias and translators, CD- and DVD-ROMs, and commercial language learning software programs, among many others. Increasingly, learners are not limited to simply being consumers, they can also play an authoring role by using available tools to create their own language learning activities (e.g. Hot Potatoes), publish their own blogs (e.g. Blogger), or design their own websites (e.g. Dreamweaver). However, while any of these technologies can be used for CALL, for the purposes of this study, the term CALL as it is used outside of this literature review most often refers specifically to commercial language-learning software programs intended for self-instruction (e.g. *Rosetta Stone*).

2.6.1 Conceptions of CALL

A distinction is often made in CALL between the computer-as-tool and the computer-as-tutor (Levy 2000). In the former case, interactions are generally person-to-person, and applications include word-processing, e-mailing, and looking at authentic target language materials on the web. In such contexts, the computer is not assuming any explicit language teaching function, although learning may result. In the

latter case of the computer-as-tutor, interactions are person-to-computer, and applications include using dedicated language learning websites (e.g. BBC Languages) and following commercial language learning software programs (e.g. *Tell Me More*). In these contexts, the computer is being used explicitly for the purpose of language study and practice. As the present study looks at two commercial language learning software programs (i.e. *Tell Me More* and *Rosetta Stone*), it was in this latter context of the computer-as-tutor that participants were working. There are conflicting views in the literature on whether or not the computer is up to the task of acting as a language learning tutor. While Harrington and Levy (2000:20) assert that “[t]he computer tutor actively guides learning both through its design and the feedback it provides for the learner”, Kaltenböck (2001:186) argues that this is a precarious role indeed, and the computer “needs to be put into the right perspective: it is a learner’s tool, not an expert tutor who simply takes over from a human, thus perpetuating the traditional classroom situation.” Dedicated software. Milton (1997, in Kaltenböck 2001:186) argues, too frequently “pretends to the role of the tutor without being able to respond as effectively as a human expert.”

In terms of CALL methodology, at least two competing historical views have been suggested in the literature. Warschauer and Healey’s (1998) account divides CALL into three historical periods: behaviouristic CALL, occurring throughout the 1970’s and 1980’s; communicative CALL, occurring throughout the 1980’s and 1990’s; and integrative CALL, meant to occur at the beginning of the 21st century. Within each of these periods, popular conceptions of teaching and learning have influenced CALL material design. Behaviouristic CALL views language learning as a learned habit, instilled through repetition and mimicry. Materials designed during this period adopt audio-lingual and drill-and-practice approaches to language teaching, and focus on accuracy as the primary goal. Communicative CALL is based on models of cognitive theory, and views language learning as a contextually-situated practice. Materials designed during this period aim to put language into context through communicative tasks that focus on fluency. Finally, Warschauer and Healey predict that integrative CALL will be based on models of socio-cognitive theory that emphasize authentic contexts of language in use, where the ultimate goal is learner agency.

Bax (2003) criticizes Warschauer and Healey’s (1998) account for being inconsistent and unclear, and proposes his own account of the history of CALL.

which he divides into three stages: restricted, open, and integrated, where each stage roughly corresponds to Warschauer and Healey's behaviouristic, communicative and integrated periods. The main discrepancies that Bax's model attempts to account for relate to an inconsistent timeline and misleading terminology. For example, Bax argues that to confine the behaviouristic period to the 1970's and 1980's is to ignore the reality that many CALL materials in use now, in the 21st century, continue to be designed using the behaviourist model. Furthermore, Bax insists that the communicative period has not yet ended, and the integrative period has not yet begun, as predicted by Warschauer and Healey. Finally, Bax claims that to call the current period communicative is to ignore the reality that so many CALL materials are not designed as such. Instead, Bax proposes this new model, which he conceives of as occurring in stages, rather than historical periods. The restricted stage is characterized by closed drills and questions, for which is it easy to provide immediate feedback in the form of "right" or "wrong". Interactions are primarily person-to-computer. The open stage is characterized by more open-ended tasks, such as games, simulations, and some web interactions (e.g. e-mail, chat rooms). Feedback is not restricted to "right" or "wrong", but is directed at skill development in terms of both linguistic and computer skills. Interactions are primarily person-to-computer, although increasingly person-to-person. Bax suggests that educators in the developed west are currently working in the open stage. In order to reach the integrated stage, where interactions are primarily person-to-person, and where the emphasis of activities is on interpreting, evaluating, and stimulating thought, a process of normalization must occur, where computers are no longer viewed with exaggerated fear and awe, but are integrated into classroom activities as noiselessly as pens and books. As Bax (2003:23) explains, educators do not speak of BALL (book-assisted language learning), and thus, "CALL practitioners should be aiming at their own extinction".

2.6.2 CALL effectiveness research

For institutions to justify the immense investment necessary to furnish learners with computers and CALL materials, a great deal of CALL effectiveness research has been conducted; yet, so far findings have been inconclusive (Burston 2003; Felix 2005a, 2005b, 2008), perhaps indicating that Bax's (2003) vision of the extinction of CALL practitioners is still some way off. Comparative studies of CALL and non-CALL learners have shown only insignificant performance gains and provided no

conclusive evidence of any added advantages connected with the use of CALL (Burston 2003). Nonetheless, Felix (2005b, 2008) tentatively claims that there is enough data to believe that CALL may have positive effects on vocabulary development, spelling, reading, and writing, and that learner perceptions of CALL are generally positive when the technology is well-supported (although such perceptions may not be reflected in performance gains). However, there is some concern regarding the nature of effectiveness research, with positive findings possibly over-reported in the literature (Felix 2005a) and design issues potentially obscuring the results (Burston 2003; Felix 2005b, 2008; Zhao 2003). Through meta-analysis, Zhao (2003) demonstrates that effectiveness research has been limited by at least four factors: few well-designed empirical studies, studies limited to higher education and adult learners, studies limited to English as a second/foreign language (ESL/EFL) and popular foreign languages, studies limited in length and scope (i.e. looking at only one or two features such as grammar or vocabulary). It is worth noting that Felix (2005b, 2008) views limited scope as an asset rather than a liability in effectiveness research. Burston (2003) argues that the problem with effectiveness research is technocentricity: it has focused too much on attempting to show whether or not CALL is better than non-CALL, usually via quantitative measures such as comparing the test scores of CALL and non-CALL learners. This has caused problems, first with external reliability (studies were not replicable as results could not be separated from contextual variables such as novelty and teacher effects), then with external validity (where contextual variables were so heavily controlled for within experimental conditions that the results were rendered useless to natural classroom settings). Burston (2003:223) argues that rather than asking whether or not CALL is better than non-CALL, studies should attempt to determine how CALL “contributes (or not) to the realization of our pedagogic aims”. This shift in focus allows CALL to be appropriate in some contexts and inappropriate in others, with no pretense of accounting for all possible scenarios. To this end, Felix (2005b) reports a positive trend of moving away from purely quantitative studies towards mixed methods studies. These more recent studies go beyond comparisons of CALL and non-CALL learners and explore different types of CALL, often adopting a process- rather than product-oriented approach (i.e. asserting the importance of studying learner behaviour alongside learning outcomes) (Ma 2008).

2.6.3 CALL evaluation

In recent years there has been some concern about the apparent methodological gap between CALL and SLA theory (Chapelle 1997, 1998, 2001b, 2004; Harrington and Levy 2001; Jamieson *et al.* 2004; Levy 2000). As was found to be the case for self-instruction audio programs (Bidlake 2005; Jones 1996; Roberts 1995), there has been some neglect by applied linguists to subject CALL programs to rigorous evaluation based on established theory. In her appeal to CALL practitioners to bridge this gap, “CALL in the year 2000: still in search of paradigms?”, Chapelle (1997:20) questions, “[w]hy is there such a dissonance between even the most technically sophisticated work in CALL and SLA research?” In response to this question, Chapelle quotes researchers who have named the field’s incomplete understanding of SLA as the main obstacle to a proper critique of CALL research. To this, Chapelle (1997:21) argues:

Despite these implications that informative research on CALL must wait for a completely articulated theory of language teaching or psycholinguistic processing model of a second language, it is clear that the need exists for perspectives and research methods that can guide in the development and evaluation of CALL activities today.

In response to this need, Chapelle (2001b:8) proposes six criteria for evaluating CALL materials:

- Language learning potential: the degree of opportunity present for beneficial focus on form
- Meaning focus: the extent to which learners’ attention is directed toward the meaning of the language
- Authenticity: the degree of correspondence between the learning activity and target language activities of interest to learners out of the classroom
- Learner fit: the amount of opportunity for engagement with language under appropriate conditions given learner characteristics
- Positive impact: the positive effects of the CALL activity on those who participate in it
- Practicality: the adequacy of resources to support the use of the CALL activity

Language learning potential and meaning focus arise from SLA research that promotes focus on form within meaning-based instruction, while authenticity arises

from research that advocates task-based instruction aimed to meet learner needs. Learner fit and positive impact arise from SLA research that recognizes the influence of these criteria on learning outcomes, the former with respect to learner attributes and the latter with respect to attitudes and motivation. Finally, practicality acknowledges the essentials needed to carry out the CALL activity (e.g. hardware, software, time, money, personnel).

In collaboration with Jamieson and Preiss (Jamieson *et al.* 2005), Chapelle used this framework to have developers, a teacher, and students evaluate an online ESL course, in what she terms an empirical evaluation. Chapelle (2001a, in Jamieson *et al.* 2004:397) distinguishes between judgmental and empirical evaluations, where the former is “based on the logical analysis of a CALL activity...by the evaluator”, and the latter is “based on the quantitative or qualitative analysis of a CALL activity through observed data which are summarized by the evaluator”. Ideally, “evaluation should include both judgmental and empirical analyses” (Chapelle 2001a, in Jamieson *et al.* 2004:397). The results of the evaluation indicate that the course in question possessed good learning potential, meaning focus, learner fit, and positive impact. In terms of authenticity and practicality, the results are less positive. The students felt that the course content was not authentic, in that it did not teach the kind of language they needed outside of the classroom. Moreover, the students reported having difficulty in learning to navigate the interface and the teacher felt that the time required on her part to oversee the course was excessive and impractical. Jamieson *et al.* underscore the context-specific nature of the evaluation, noting that the course may be evaluated differently in different contexts.

While this is just one example of how Chapelle’s (2001b) criteria can be applied, the framework appears to be a useful tool for applying SLA theory to the evaluation of CALL materials. Notably absent, however, are criteria for evaluating quality assessment and feedback, two very important aspects of language teaching and learning. This issue is addressed in Chapter 6, where the framework is revisited in more detail and critiqued for the purposes of evaluating the commercial CALL programs marketed for self-instruction used in the present study.

Although Chapelle’s (2001b) set of criteria is not the first framework for evaluating CALL materials to be suggested in the literature, it does improve on many previous offerings. Hubbard (1988:52-53) suggests four guiding principles for developing such a framework: (1) it should be grounded in established views of

language teaching methodology; (2) it should be designed with the broadest possible scope to accommodate teachers, students, methods, and syllabus goals; (3) it should be used alongside (and not separate from) the development and implementation of CALL programs; and (4) it should reflect the non-linear nature of CALL programs by supporting an evaluation process that allows for “the multiple dependencies among the various components of CALL” (Hubbard 1988:53). This final criterion argues against the tendency for frameworks to consist of little more than checklists, and promotes a framework that is open-ended and flexible. Chapelle’s framework satisfies Hubbard’s guiding principles on all four counts. As described above, it is grounded in established views of language teaching methodology. It is broad in scope, and only requires minimal modifications to apply it to the self-instructed context. As also described above, it was developed and refined alongside the development and implementation of a CALL program (Jamieson *et al.* 2004, 2005). Finally, it is non-linear, open-ended, and flexible. For these reasons, I have adopted this framework for the purposes of the present study.

2.7 Conclusion

This chapter presented a review of the literature relevant to an understanding of self-instructed CALL as experienced by the 11 case-study participants. The literature review centered on the broad themes of learner experience in self-instructed contexts and CALL. The chapter began with a discussion of self-instruction and autonomy, and because successful self-instruction is said to be dependent on a high level of learner autonomy (Benson 2001), issues around fostering autonomy followed, including metacognitive knowledge, learner beliefs, and the role of the materials in fostering autonomy in the self-instructed context. Within these discussions it was argued that developing metacognitive knowledge may allow learners to move from passive receptacles of knowledge to active participants in their own learning (Paris and Winograd 1990, in Wenden 1998), that learner beliefs may directly enhance or inhibit success in self-instruction (Cotterall 1995), and that in teacherless contexts, such as self-instruction, the materials *can* and *should* promote autonomization in their learners (Hurd *et al.* 2001; and Murphy 2008).

Subsequent discussions concerned motivation, learner attributes, and learner experience in related self-instructed and CALL contexts. The discussion of motivation began by examining mainstream motivational psychology and then moved on to the

ways in which motivation has been conceptualized in SLA research, including a discussion of a relatively new area of research, demotivation. As the present study was greatly impacted by learner drop-out, an understanding of demotivation is vital. Surprisingly, one study has shown that the absence of demotivating factors was more successful in reducing demotivation than the presence of motivating factors (Gorham and Christophel 1992, in Falout *et al.* 2009). This finding underscores the importance of determining what factors learners experience as being demotivating. The discussion of learner attributes examined how personality and learning preferences may influence learning outcomes. In particular, tolerance of ambiguity, which is an aspect of personality, may have a significant impact on self-instruction, wherein the learner has little or no access to a teacher or native speaker to clarify ambiguities (White 1999). For a review of the literature on learner experience in the self-instructed CALL context, which is largely non-existent, a discussion of research examining this experience in related self-instructed and CALL contexts followed.

The chapter concluded with a discussion of CALL, including conceptualizations of CALL, CALL effectiveness research, and CALL evaluation. Current conceptualizations of CALL position it as straddling three stages: (1) the behaviouristic or restricted stage, characterized by a drill-and-practice approach, (2) the communicative or open stage, characterized by more open-ended person-to-computer tasks, and (3) the integrated stage, characterized by an emphasis on person-to-person interaction and the normalization of technology (Bax 2003; Warschauer and Healey 1998). The discussion of CALL effectiveness research highlighted the fact that such research has so far been inconclusive and possibly flawed (Burston 2003; Felix 2005a, 2005b, 2008; Zhao 2003). Significantly, rather than asking whether or not CALL is superior to non-CALL, as most CALL effectiveness research has done, studies should attempt to determine how CALL “contributes (or not) to the realization of our pedagogic aims”. (Burston 2003:223). Finally, the discussion of CALL evaluation presented a framework of six criteria for evaluating CALL materials (Chapelle 2001b). This framework was developed in response to the apparent methodological gap between CALL and SLA theory, and will be revisited in Chapter 6 for the purpose of evaluating the commercial CALL programs used in the present study.

The next chapter presents a discussion of the methodology employed in the present study and introduces the findings of the pilot study.

CHAPTER 3: Methodology

3.1 Introduction

This chapter provides a description and justification of the research methodology used in the present study. I present the research questions first, and follow these with descriptions of the participants, the ethical considerations, the CALL software, the procedure, the research design, the methods of data collection (case-studies, diaries, interviews, observations, and online tracking), the methods of data analysis, and a discussion of the epistemological framework. This chapter also contains a brief discussion of the pilot study, which served to inform the methodology of the main study.

3.2 Research questions

In light of the need to investigate self-instructed CALL, I approached this study conscious of the fact that “[s]mall-scale studies usually have to make a choice between objective rigor (hypothesis-driven, controlled-variable, single-issue experiments) and subjective richness (open-ended, holistic explorations); only larger studies can afford the luxury of both” (Mitchell 1989, in Jones 1994:443). Moreover, “[w]hen exploring and mapping out a virtually unknown field, we need a maximally open-ended approach, for we do not know in advance which details are relevant and which are not” (Jones 1996:367). Therefore, in search of subjective richness in this relatively unexplored field, I proposed the following three open-ended questions:

1. What are the experiences of learners working with commercial CALL programs marketed for self-instruction?
2. What common themes emerge as most relevant to shaping these experiences?
3. What are the pedagogical implications of the learners’ experiences for CALL theory and program design?

Each research question builds upon the one preceding it. Research question 1 enquires into the experience of each participant in its entirety, from inception to conclusion. The focus here is on the individual participants, and no attempt is made to generalize or draw connections between cases. As such, the discussion is organised by case-study participant. Research question 2 enquires into the common themes shared by all or most of the case-study participants, and the discussion is organised thematically.

which highlights the connections between the cases. While the distinction between research questions 1 and 2 results in a small amount of repetition, such repetition is justifiable on account of the very nature of case-studies, which are lauded for candour and criticized for non-generalizability (Bailey 1991). As such, in the discussion of research question 1 I attempt to exploit candour. As Brown and Rodgers (2002:46) argue:

If the researcher is straightforward with us, discusses problems in carrying out the research, acknowledges confusion about some analyses, and does not try to make the study seem overly important, then we feel we are closer to the actual case situation. We may even feel that we are being given a personal introduction to the participants(s), as well as an honest look at both the methodology and the results of the study.

By focusing on the experience of each participant in its entirety, I hope to achieve as much transparency and openness as possible in discussing my findings. Moreover, because case-studies have been criticized for non-generalizability, it is important to present each participant's experience in its own right as a stand-alone case-study. Nonetheless, the fact remains that there *are* commonalities between the cases. To ignore these common themes would be to overlook a major potential source of insight into the experience of self-instructed CALL. For that reason, in the answer to research question 2, I attempt to draw connections between the cases. While I acknowledge that the existence of connections between the 11 cases in the present study does not necessarily entail generalizability to other contexts, it does suggest potential implications for CALL theory and program design, suggestions for improvement, and directions for future research, which are issues taken up in the discussion of research question 3. For these reasons, I contend that the discussions of each of the three research questions highlight the findings in different and useful ways, regardless of the small amount of repetition that exists among them.

Absent from these research questions is a question addressing proficiency gains. This study did not enquire into what gains, if any, were made by the participants while using their self-instructed CALL programs. It is reasonable to assume that, in order for learners to make significant proficiency gains, they must stick with their programs for a considerable period of time. However, learner drop-out is predicted to be one of the major obstacles to this mode of learning (Jones 1996, 1998, Umino 1999). Therefore, rather than investigate proficiency gains, it is arguably more critical to investigate learner experience in order to gain insights into the

tensions there, to see what might be at the root of learner drop-out, and to see how that might be addressed. Of course, where proficiency gains as perceived by the participants do contribute to drop-out, they are incorporated into the analysis. However, crucially, these are learner-perceived proficiency gains, not gains measured externally through the use of pre- and post-tests administered outside the self-instructed CALL context.

3.2.1 Pilot study research question

For the purposes of the pilot study, which began two months prior to the beginning of the main study, I proposed an alternate research question:

P1. What methodological and technical issues arise during the pilot study, and how can these be resolved for the main study?

Three learners participated in the pilot study using Auralog's commercial CALL program, *Tell Me More*: "Paul", "Ahn", and "Seri". Although the purpose of the pilot study was primarily to test the soundness of the methodology, both methodological and learner insights resulted from an analysis of the data. Two methodological insights (i.e. need for increased diary training and need for observation) served to inform the methodology of the main study and I discuss these below as appropriate. Aside from these two modifications, the pilot study followed the same general procedure as the main study and for that reason it is not presented as a separate discussion. Because there were no methodological problems grave enough to invalidate the data, the learner insights are incorporated into those resulting from the main study, as they serve to complement and support the main study findings in useful ways.

3.3 Participants

Eleven participants, whose names have been changed here to protect confidentiality, volunteered for the study after having learned about it via word of mouth, flyers posted around the city, and/or e-mails sent out to various mailing lists. Recruitment was difficult, as the demanding longitudinal nature of the study required participants to be self-selected and motivated (high levels of motivation were assumed based on the participants' eagerness to volunteer even after learning of the longitudinal commitment). Additionally, I set the following conditions for participation: participants must not be attending classes in their chosen language

during the study, and choosing English as the language of study would not be possible, as the research was UK-based and I wanted to look at language learning outside the target language context. In light of these considerations, I was content to conduct the study with such a modest number of participants.

Of the 11 participants six are women and five are men, and they range in age from 19 to 61. Four of the participants speak English as an L1, and seven speak a range of languages as L1s, including Vietnamese, Malay, Japanese, Mandarin, German, and French. All of the participants who do not speak English as an L1 speak English as an L2 at a high proficiency level, as shown by the fact that they have all been admitted into degree programs at a UK-based university. Nine of the participants are multilingual, already speaking two or more languages prior to their participation in this study, while two speak only their L1 (English in both cases) and their chosen language of study. For the purposes of this study, six of the participants chose to study languages with which they already had some familiarity (ranging from beginner- to intermediate-level according to self-assessments), while five chose to study languages with which they had no prior experience. See table 3.1 for a breakdown of participant details organised in chronological order according to start date.

| “Name” | Gender | Age | L1 | L2s prior to study ¹ | Program and language of study |
|---------|--------|-----|------------|---------------------------------|-------------------------------------|
| Paul* | M | 41 | English | Spanish (beginner) | <i>Tell Me More Spanish (v.9)</i> |
| Ahn* | F | 23 | Vietnamese | English, French (beginner) | <i>Tell Me More French (v.9)</i> |
| Seri* | F | 28 | Malay | English | <i>Tell Me More Spanish (v.9)</i> |
| Marc | M | 30 | English | French, Japanese (beginner) | <i>Rosetta Stone Japanese (v.2)</i> |
| Shoko | F | 40 | Japanese | English | <i>Rosetta Stone Italian (v.3)</i> |
| Rilla | F | 46 | German | English | <i>Rosetta Stone Mandarin (v.2)</i> |
| Mathieu | M | 24 | French | English, German (intermediate) | <i>Rosetta Stone German (v.3)</i> |
| Cheng | M | 25 | Mandarin | English | <i>Tell Me More French (v.9)</i> |
| Li | F | 19 | Mandarin | English | <i>Rosetta Stone German (v.3)</i> |
| James | M | 61 | English | French (beginner) | <i>Tell Me More French (v.9)</i> |
| Heather | F | 61 | English | French, German (intermediate) | <i>Rosetta Stone German (v.3)</i> |

Table 3.1: Overview of the participants

*Pilot study participant

3.4 Ethical considerations

I submitted my application for ethics approval on October 25, 2007. Shortly thereafter the committee agreed with my assessment that my proposed study contained no significant ethical implications and I was granted clearance to begin. According to ethical guidelines, I presented each participant with a consent form at our first meeting that explained the purpose of the study, highlighted the voluntary nature of their participation, and guaranteed that their confidentiality would be protected (see Appendix A). With respect to confidentiality, I have made the following efforts to protect participant identity: I created an alias for each participant after our first meeting and have only ever referred to the participants by their aliases in any research-related discussions and documentation; within case files I have changed identifying biographical information where necessary; audio and video data have only ever been shared on one occasion (for research purposes) with the participant’s consent; all identifying electronic data and documentation have been

¹ Some participants have L2s other than those listed here; however, I have listed those of most immediate importance to the study. For more detailed information regarding other L2s, see the case files in Chapter 4.

secured via password protection; and all identifying hard copies of data and documentation have been secured in my personal filing cabinet or shredded when no longer needed. Moreover, participant consent was obtained prior to every interview and observation session for the purpose of audio and video recording the session. In line with my personal ethical beliefs with regards to research, I have done my utmost to involve participants in as much of the research process as possible, sending them transcripts of interview and observation sessions for their comment and approval, keeping them informed of progress and publications, and pending completion, I intend to send out a participant debriefing report, detailing the outcomes of the research for their personal information.

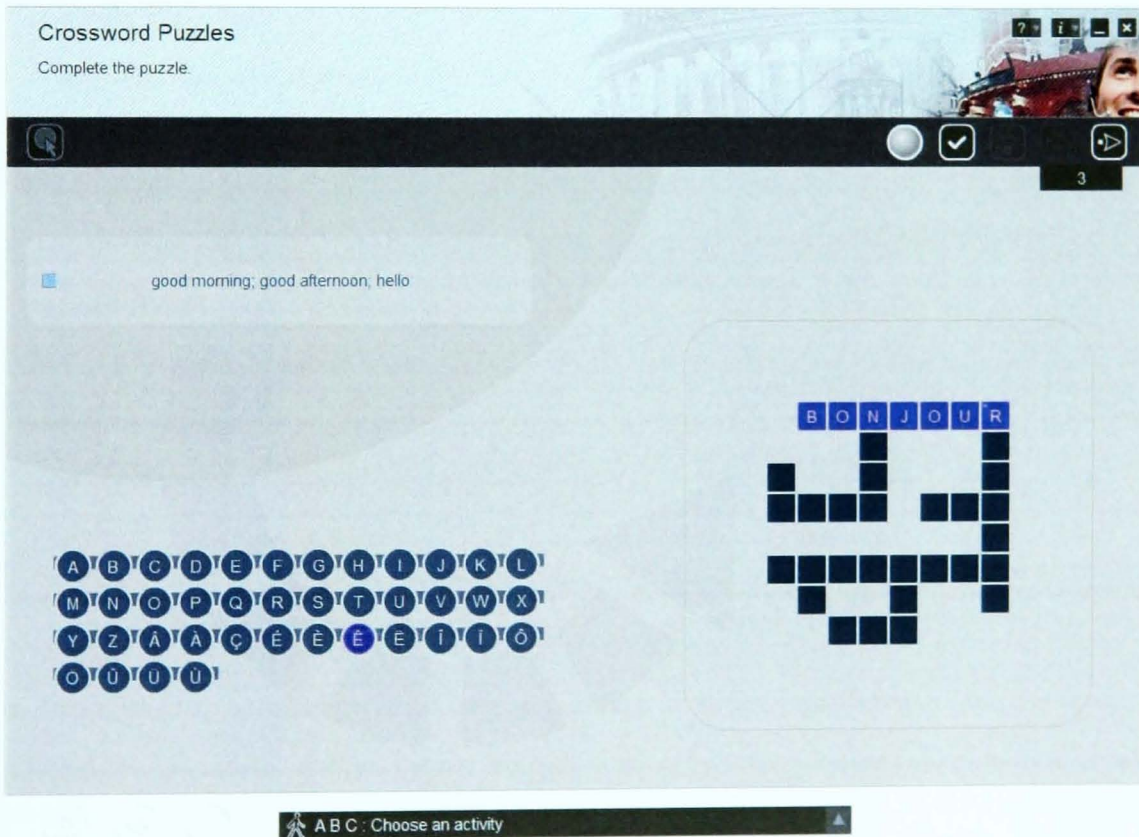
3.5 CALL software

The participants used one of two commercial CALL programs in one of six languages: *Tell Me More* in Spanish or French (version 9) or *Rosetta Stone* in Japanese, Mandarin (version 2), German, Spanish or Italian (version 3). Both programs boast high-end graphics, cutting edge speech recognition software, and claim to be based on sound pedagogical theory, developed by experts in both language teaching and technology. Although both *Tell Me More* and *Rosetta Stone* claim to teach foreign languages the way people learned their native language (c.f. “Auralog has developed a solution that enables students to learn another language in the same environment as their native tongue” (Auralog 2010: website) and “*Rosetta Stone* is based on this idea: the best model for learning a new language is the natural way in which we learned our native language” (Stoltzfus 1997)), in their final execution, the two programs greatly differ in their approaches to language teaching and learning.

Tell Me More is advertised as an “all-you-need” package, “[f]ocusing on all major areas of language learning (speaking, comprehension, reading, and writing)... [and] teaching you all of the skills necessary to become truly language proficient” (Auralog 2010: website). It claims to offer “2000 hours of language learning” (Auralog 2010: website) including “40 different types of activities...[which] translates to close to 10,000 exercises per program” (Auralog 2010: website). It offers three modes to navigate the software: Guided Mode, which suggests a learning pathway based on pre-set learning objectives; Free-To-Roam Mode, which allows learners to select their own learning pathway; and Dynamic Mode, which “adapts the

linguistic content to help students work on the skills that they need to improve the most, as calculated by their performance in each activity” (Auralog 2007c:4). Among its 40 types of activities are crossword puzzles, word searches, hangman and many other games that treat target language items in isolation, rather than in communicative contexts. It is perhaps on account of this feature that a participant in this study referred to *Tell Me More* as “a book of puzzles” (Paul, diary). The program additionally offers grammatical explanations as help files separate from the activities themselves, and there is a built-in glossary to look up word meanings.

The following screenshot portrays a typical *Tell Me More* crossword puzzle activity from level one (of 10). Here, the prompt is given in English and the learner is expected to enter the equivalent word in the target language (in this case, French) in the puzzle. The prompt in this example are the greetings “good morning, good afternoon, hello”, which correspond with “*bonjour*”, as entered into the puzzle.

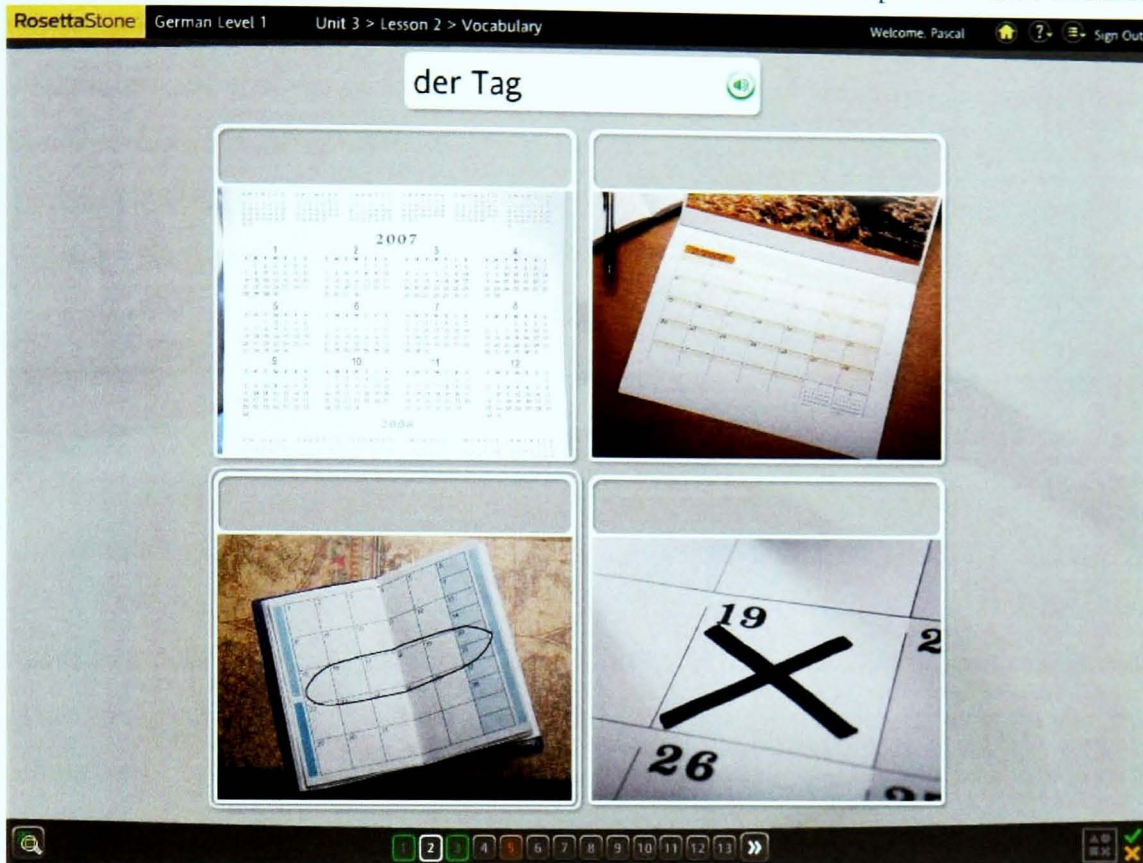


© Auralog 2007a

Rosetta Stone is also advertised as an “all-you-need” package, with lessons built around reading, writing, listening, and speaking skills. Using the in-house

developed “Dynamic Immersion” method, target language items are presented without translations or grammatical explanations, using only pictures and illustrations to convey meaning to the learner. Due to this design, target language items are restricted to what can be represented visually. The entire *Rosetta Stone* series is developed around a single language bank, from which programs for more than 30 languages have been developed. As such, every program presents the exact same content, translated into the target language. Photographs and illustrations are not language-specific, making the programs relatively inexpensive to produce, but missing out on a significant opportunity to present target language culture in authentic settings (Kramsch 1993). The lessons move from single words to short phrases to more complicated sentences in a highly repetitive manner as the learner progresses through the program. Although the learner is free to work through the program as s/he chooses, the activities are presented in a linear sequence, each activity building on the previous one. At the end of activity blocks there are summarizing “Milestone” tests to evaluate the learner’s overall progress. Version 3 incorporates a feature called “Adaptive Recall”, which is an activity using an intelligent design to remember which target language items the learner has previously made mistakes on, and reintroduces these items at specific intervals for extra practice.

The following screenshot portrays a typical *Rosetta Stone* activity from level one (of three). Here, the prompt is given in the target language (in this case, German) and the learner is expected to click on the corresponding image. The prompt in this example is “*der Tag*” which translates as “the day” and corresponds with the bottom right image of a calendar zoomed in to focus on a single day.



© Rosetta Stone 2007b

3.6 Procedure

At the first meeting, I briefly interviewed each participant to obtain a language learning history, and either gave them a copy of the *Tell Me More* program on DVD-ROM, or set them up with a *Rosetta Stone* online learner account. As a general guide, I suggested they spend two to three hours per week on their program for about six to eight weeks, which is about the same commitment as a university-level foreign language module. Immediately following each learning session, I asked that the participants write a diary to record the session, addressing whatever they found to be relevant to their experience. Prior to beginning the study, I provided participants with a diary training tutorial to assist them with this task. During the tutorial, I enquired about diary-writing experience and I provided a participant handout including an FAQ sheet (see Appendix B), two examples of authentic diary entries (see Appendix C), and a series of optional prompts that address themes I predicted to be central to learner experience (see Appendix D). Twice during the study I e-mailed the participants and asked them to send me an electronic copy of their diaries in order for me to monitor progress and ensure that useful data were being collected. This was timed first towards the beginning of the study, and then again towards the end, prior

to conducting the interview and observation. I provided them with no training in self-instruction or how to use the programs. I felt that to offer training would be to compromise my ability to answer my research questions, which enquire into the self-instructed CALL experience. By definition, learners in this context do not have a human teacher to provide self-instruction training (e.g. offering advice on goal-setting, setting-up learner contracts, monitoring progress, determining pace, self-assessing). Nor do they have access to a human-led CALL tutorial. For me to have taken on this role would have worked against the aims of the study.

3.7 Validity and reliability

Within qualitative research, validity and reliability are the primary measures of rigour and merit. Validity is defined as “the degree to which the results of a study can be accurately interpreted and effectively generalized” (Brown and Rodgers 2002:294) and can be divided into two types: internal and external validity. Internal validity is “the degree to which the researchers have observed what they set out to observe and have reported all the critical observational data” (Brown and Rodgers 2002:289), while external validity refers to the generalizability of the findings to other contexts. Reliability is defined as “the degree to which the results of a measure or study are consistent” (Brown and Rodgers 2002:292) and can be likewise divided into internal and external measures. Internal reliability is “the degree to which we can expect consistent results if the data for the study were re-analyzed by another researcher” (Brown and Rodgers 2002:289) (i.e. inter-coder reliability), while external reliability refers to replicability and the consistency of the findings if the study were repeated.

In the following discussions of research design, data collection, and data analysis, I describe my efforts to ensure the validity and reliability of the present study. However, as I argue below, the measures of external validity and external reliability are not appropriate in this context, as the nature of case-studies (particularly ones with a small number of participants) precludes generalizability to other contexts and the highly subjective nature of learner experience renders it unlikely that results would be consistent if the study were replicated. In contrast, internal validity and internal reliability are extremely relevant and I describe below my efforts to address these measures through methodical coding, a second-coding exercise, and qualitative content analysis.

Moreover, in my presentation of the findings in Chapters 4, 5, and 6, I attempt to pay heed to one of Silverman's (2001:34) major criticisms of qualitative research, anecdotalism, which is "revealed in the way in which research reports sometimes appeal to a few, telling 'examples' of some apparent phenomenon, without any attempt to analyse less clear (or even contradictory) data". In my effort to attend to this criticism by presenting counter-examples and examples that deviate from my understanding of the data, I hope to render my analysis more internally valid to the critical reader. However, I would argue that all analysis of qualitative data involves interpretation, which I believe is informed by subjectivity, rendering internal reliability problematic despite second-coding exercises. In an attempt to account for this area of concern, I present my interpretations as transparently as possible, thus allowing for reinterpretation by the critical reader where appropriate.

3.8 Research design and data collection

I felt I could best address my research questions by conducting multiple longitudinal case-studies incorporating diaries, interviews, observations, and online tracking. This multi-method design was inspired in part by Murray's (1999a, 1999b) study, described above. To address what he saw as a paucity of qualitative inquiry into the evaluation of CALL learner experience, Murray undertook a multi-method investigation of a CALL program using language learning histories, diaries, video observations, think-aloud protocols, interviews, and pre-/post-tests. He found that:

[N]one of the research tools employed in this study, when taken individually, appear to offer a great deal of pertinent information. However, configured as a network, narratives, diaries/journals, video observation and interviews produced data which conveyed a picture of the learner's experience from his/her point of view. (Murray 1999b:191-192)

Likewise, my intention was to exploit the multi-method design to its fullest potential for triangulation and "thick description" (Geertz 1973). Each of my chosen methods has advantages and disadvantages and the following is a discussion of the role they played in the present study.

3.8.1 Case-studies and diary studies

Case-studies have a long history in first language acquisition (FLA) and SLA research. Leopold's (1978) study of his daughter, Hildegard, and Brown's (1973) study of Adam, Eve, and Sarah are two famous examples in FLA research. In SLA

research, famous examples include Naiman *et al.*'s (1978) and Rubin and Thompson's (1983) studies of "good language learners". A noteworthy trend in SLA research is the self-case-study in which researchers analyze and report on their own experiences of language learning, as captured through a diary study (e.g. Bailey 1980; Bidlake 2005; Jones 1994, 1995, 1996; Schmidt and Frota 1986; Schumann 1980; Schumann and Schumann 1977). Within the case-study design, a wealth of data collection methods can be exploited. However, as the present study made use of diaries as a primary data source, in the following discussion I give special attention to case-studies that are also diary studies (henceforth, diary-case-studies).

In Bailey's (1991) critique of diary-case-studies, she identifies three problematic and three advantageous aspects of this research design. Problems relate to the small number of participants, the subjective and often unduly retrospective nature of the data, and the generalizability of the findings. These problems combine to expose two major weaknesses of diary-case-studies: internal and external validity. Since the researcher is essentially the gatekeeper of what does and does not count as data, there is the risk that important data will go unaccounted for or be discarded, compromising the internal validity. Likewise, the generalizability of diary-case-studies has been seriously called into question. It is difficult to extend the findings of small samples of participants to larger groups of learners, compromising the external validity. Yet, there is still a strong argument to be made for diary-case-studies, when treated as one piece of a larger mosaic. To quote Abramson (1992, in Jones 1996:88):

[C]ase-studies should not be judged in isolation, but relative to other methods of examining the same issue. Thus, in a predictive sense, a case-study can generate hypotheses for a later, more objective study. And in an illustrative sense, a case-study can add vital real-life structure to the bitty, disparate data provided by multi-subject surveys, experiments or literature reviews.

As for the advantages of diary-case-studies, Bailey cites benefits for language teachers, language learners, and second language researchers. By examining the introspective accounts of learners, teachers gain an emic perspective of individual learner experience and an appreciation for the many different ways instruction can be perceived by students. By documenting the experience of language learning through diary-writing, learners are able to vent their frustrations and develop metacognitive knowledge. Within second language research, diary-case-studies provide means for data triangulation, insight into learner variables, and opportunities for "listening to the

learner voice” (Conole 2008) not available in other research designs. As Bailey (1991:89) stresses:

[We cannot] begin to understand the factors which drive people from the language classroom unless we listen to the learners: the drop-outs, the discouraged and the overwhelmed who often just disappear from experimental studies, or suffer through the course to the end without our discovering why they did poorly.

Thus, diary-case-studies used to explore and gain insight into individual learner experience with an eye towards minimizing issues of internal validity are arguably a worthwhile means of conducting SLA research, particularly when used alongside other methods of data collection to enable triangulation. Below I describe the diary-writing protocol and additional methods of data collection employed in the present study, as well as a discussion of my efforts to minimize issues of internal validity and internal reliability through methodical coding, a second-coding exercise, and qualitative content analysis.

3.8.2 *Diaries*

As defined by Bailey and Ochsner (1983:189):

A diary study in second language learning, acquisition, or teaching is an account of a second language experience as recorded in a first-person journal...[T]he central characteristic of the diary studies is that they are introspective: The diarist studies his [sic] own teaching or learning. Thus he can report on affective factors, language learning strategies, and his own perceptions—facets of the language learning experience which are normally hidden or largely inaccessible to an external observer.

The use of introspective methods, such as diaries, has long been critiqued for reasons of unreliability and subjectivity. Despite their popularity among behavioural psychologists at the turn of the twentieth century, these methods have since been called “untrustworthy for scientific purposes” (Watson 1913, in Brown and Rodgers 2002:54). Yet, the past three decades has shown a resurgence of interest in introspective methods (Brown and Rodgers 2002). Since this resurgence, many researchers (e.g. Bailey 1980; Bidlake 2005; Halbach 2000; Huang 2005; Jones 1994, 1995, 1996; Murray 1999a, 1999b; Schmidt and Frota 1986; Schumann 1980; Schumann and Schumann 1977) now use introspective methods, such as diaries, in their studies of SLA, and regard them as “well suited for looking at, inter alia, individual learner factors and the status of declarative knowledge” (Jones 1994:443).

These researchers promote the usefulness of diaries as being an ideal way to gather thoughtful and reflective data on the acquisition process. Bailey (1991:87) argues that “diary studies can provide us with important missing pieces in this incredibly complex mosaic—pieces which may not be fully accessible by any other means”. Moreover, in a comparison study of classroom research methods, Brown (1985:125) reports that “[t]he diary study is one of the best methods for getting at the individual learner variables”. Brown (1985:133) cites other advantages of the diary study as being “the most natural of all possible research choices”, with minimal “research intrusion” (Brown 1985:125), and having the most “immediate use for learners...[by allowing] for self-evaluation, improvement and growth” (Brown 1985:133).

Diary studies generally fall into one of two categories: those in which the researcher is also the diarist (i.e. diary self-study) and those in which the researcher analyzes the diaries of others. The following discussion first reviews examples belonging to the former category, and then examples belonging to the latter (which is also the category in which the present study belongs).

The Schumanns (1977, 1980) used diary self-studies to document their acquisition of Persian in Iran and Arabic in Tunisia. Subsequent analysis of the diaries allowed them to examine what they refer to as “personal variables” (Schumann 1980:51). These variables (e.g. nesting patterns, transition anxiety, rejection of methodology, maintaining personal agendas, motivation for choice of materials, the strategy of eavesdropping, competition versus cooperation, the hindering role of the expatriate community) provide insight into SLA in an extremely personal and reflective manner, which they argue would not have been as effectively elicited through other research methods. Likewise, Schmidt (Schmidt and Frota 1986) documented his acquisition of Portuguese in Brazil using a diary self-study. His analysis of the diaries allowed him to track linguistic thresholds over the five-month study by monitoring his fluency in terms of his ability to achieve specific goals. Consequently, he was able to examine and contrast the effects of formal versus informal learning in order to see how they each contributed to his developing proficiency. In the foreign language classroom context, Bailey (1980, 1983) used a diary self-study to document her experience of taking French classes in California. Despite her initial intention to use the study as a way to record learning strategies, she soon changed focus in her diaries and began to track the affective factors that influenced her learning (e.g. response to the learning environment, preference for a

democratic teaching style, need for success and positive feedback). Through her diaries, she discovered the negative impact of her competitive personality on her language acquisition.

Additionally, as part of the research I conducted as a master's student, I used a diary self-study to capture the experience of using self-instruction audio programs for learning German and Japanese (Bidlake 2005). Through my analysis of the diaries I uncovered the factors that most influenced my experience (e.g. learner preparation and support, sense of progress and pace, sense of failure and laying blame, sense of success through noticing, coping with ambiguity in a teacherless context, and clash of styles) and used these insights to make suggestions for program improvement. In many ways, this master's level research served as a kind of pilot study for the present study, in that I was able to use my own experience with self-instruction to refine my methodology and anticipate probable issues before they arose. For example, knowing diary data to be potentially limited by the diarist's comfort with this genre, I included interviews as part of the data collection design from the outset.

The advantages of diary studies with learner groups are also well-documented. Halbach (2000) used a diary study with a group of 73 Spanish EFL students to contrast the strategy use of more and less successful students. Her findings suggest that strategy use is more prevalent among high achieving students, and that weaker students may benefit from strategy training. Huang (2005) used a diary study to capture the perceived difficulties of a group of 72 Chinese EFL students. Analysis of the diaries revealed that linguistic competence is only one perceived constraint on success, while others include “undesirable teacher-learner role relationships, negative self-evaluation, examination anxiety, deficient study skills, and obstacles to independent learning” (Huang 2005:609).

A key issue with regards to diary studies and any method relying on introspective techniques is that of timing. Technically, the term “introspection” should only be used for situations in which the learner is introspecting concurrently with the event in question, such as during verbal protocols. In situations in which there is a delay between the event and the introspection, it is more accurately referred to as “retrospection”. Retrospection can be further classified as either “immediate” (i.e. taking place directly following the event) or “delayed” (i.e. taking place hours or even years following the event) (Cohen and Hosenfield 1981, in Bailey 1991:63). While it is generally agreed that the closer the retrospection occurs to the event, the more

trustworthy the data (thus immediate retrospection is preferred to delayed retrospection), concurrent introspection is not always preferred to retrospection, as the double duty of both participating in the event and reflecting on it is thought to be cognitively burdensome and distracting from the task at hand (Bailey 1991).

Another key issue relates to the fact that diary-writing is a particular genre, and may be unfamiliar to some learners. Moreover, diary-writing may be intimidating to those unused to or uncomfortable with self-reflection, resulting in scanty, unfocused entries. In his study, Murray (1999:186) laments:

Unfortunately, people, in general are not necessarily journal keepers. In spite of the direction they were given, many of the participants were not quite sure what to write about. They did not know which aspects of their experiences were noteworthy. In our society people are not accustomed to writing their thoughts and feelings about their experiences. Perhaps more importantly, who has the time or the inclination?

I experienced these issues firsthand during the pilot study, in which I encountered three main problems. First, diaries were sometimes written even more retrospectively than necessary. In several instances, participants chose not to write up their diaries immediately after the learning session; instead, they admitted to having made a few hand-written notes and then waiting for a more convenient time to type up several entries at once (i.e. delayed rather than immediate retrospection). This was obviously cause for major concern, as the trustworthiness of introspective techniques decreases significantly when there is too great a time lapse between the learning session and the retrospection (Brown and Rodgers 2002). Second, diaries were sometimes characterized by short, unfocused entries, often unrelated to the self-instructed CALL experience, yielding few insights (also reported by Murray 1999a, 1999b). Finally, diaries were sometimes missing log information (i.e. session number, date, lessons covered, and time spent on task).

Reflecting on the pilot study, I recognized that these problems were likely caused by my concern about imposing too much on the participants. When I found three participants interested in volunteering for this highly demanding study, I was so grateful that I probably minimized the work involved and was too casual about the importance of the diaries. However, I later realized that this effort to be flexible came at the expense of rich, insightful data, and in the main study I provided a diary training tutorial at the first meeting with participants and adopted four main measures to clarify my expectations.

First, I provided an FAQ handout bringing together questions raised by the participants, as well as questions they might not have thought to ask (see Appendix B). Within the FAQs, I emphasize the diaries as an integral part of the learning session, not as an optional add-on. I ask participants to judge how much time they have for a given session, and build in time for diary-writing (e.g. if they have time for a one-hour learning session, they should allow 45 minutes for program use, and 15 minutes for diary-writing). The FAQs also include a diary template for participants to use, which specifies the key information to record at the beginning of each diary entry (i.e. session number, date, lessons covered, and time spent on task). To emphasize the importance of the FAQ content, I provided participants with their own copy of the handout at the tutorial, and asked that they read it in front of me to enable further clarification, if needed.

Second, I asked participants about any previous diary-writing experience they may have had in order to ascertain whether or not they were familiar with this genre. To ensure that my understanding of the diary genre corresponded with theirs, I provided two examples of authentic diary entries (from Bidlake 2005) (see Appendix C) for them to read and comment on during the tutorial.

Third, I provided a series of questions that address themes I predicted to be central to learner experience based on the literature on self-instruction and SLA (Bidlake 2005; Jones 1994, 1995, 1996) (see Appendix D). These questions were meant to be used as optional prompts if the participants ever found themselves stuck for something to write about. I did this extremely reluctantly because it was my intention to allow the participants themselves to dictate the themes of the study through their diaries without any prompting from me. However, from the pilot study I learned that some participants do need guidance to keep them focused on the self-instructed CALL experience, and that, while these prompts would not necessarily prevent other themes from emerging from the data, they would help to ensure that insightful data resulted from the diaries. These themes focused on the areas of motivation, confidence, strategies, learning preferences, and progress.

Fourth, over the course of the case-studies I conducted routine diary checks to ensure that diaries were following the specifications necessary to yield insightful data. The first diary check was timed to occur early on, about a week after our first meeting, and the second was timed to occur three to four weeks later (or earlier in the case of a participant notifying me of drop-out). Diary checks involved e-mailing the

participants and asking them to e-mail me a sample or two of their diaries. In this way, I was able to read over the samples and provide early feedback on form and content. Participants generally expressed appreciation for this feedback and seemed happy to make the recommended adjustments.

Overall, the diaries from the main study were an improvement on those from the pilot study and it would appear that the modifications made as a result of the pilot study were worthwhile. Incidentally, only two of the eight main study participants chose to address the optional prompts, and these two participants additionally included many insights unrelated to the prompts, minimizing any concerns I had that the prompts would dictate the diary themes.

3.8.3 Interviews and observations

While diaries can be used to capture reflections on language learning, allowing the learner to address the factors most salient to shaping her/his experience, interviews can be used, as Murray (1999a, 1999b) describes, to fill in the gaps, clarify and draw out expanded expositions of the diary entries, and allow participants to comment on issues that may not have come up while writing. As Faerch and Kasper argue, “the best way...of finding out what goes on in the learners’ minds is to ask them directly” (1987, in Jones 1996:96). Used in combination, diaries, interviews, and observations can provide many useful insights into the language learning experience, resulting in a more complete picture than any of these methods used alone.

Interviews in this study were semi-structured and lasted approximately 30 minutes. The interview schedule was largely based on emerging themes from the diaries. Prior to the interview I asked participants to e-mail me all of their diaries to date. After reading through the diaries I created a list of possible points to cover during the interview, based on recurring themes and issues I wanted to explore further. As such, each set of interview schedules was designed uniquely for the participant, along with a few generic questions (e.g. How is your language study going?).

Initially, observations were not part of the case-study design. However, during the pilot study interviews, the participants occasionally expressed difficulty in describing certain aspects of the CALL software, not having the program open and running beside them to refer to or draw examples from. To account for this in the main study, I incorporated observation into the research design. Moreover, I found

that observations of the learners working with their CALL programs yielded additional insights (such as in Murday *et al.* 2008; Murray 1999a, 1999b; Ushida 2005), allowing me to observe how they approached their learning sessions, and to ask questions as they guided me through one or two learning activities. Unfortunately, due to insurmountable user access restrictions, no observations of participants working with *Tell Me More* occurred. This was because in order to run the program the user needs to insert the disc into a CD-ROM drive and download various components. However, computer permissions on campus where the observations were meant to take place (according to participant preference and convenience) forbid access to both the CD-ROM drive and downloads. Moreover, as learners work with *Tell Me More*, user files are saved on the computer's hard drive, making it difficult to switch workstations once self-instruction has begun. As a result, only observations of participants working with *Rosetta Stone*, which is delivered online and more easily accessed, were possible.

I conducted the interviews and the observations in a private room either on campus or at my home (according to participant preference and convenience). Both the interviews and the observations were digitally recorded (audio and video) with the participant's permission and later transcribed. I e-mailed copies of the transcripts to the participants, inviting comments and/or questions. None of the participants chose to comment, although they all reported having read the transcripts and deemed them acceptable.

3.8.4 Online tracking

As *Tell Me More* was delivered via CD-ROM, it had no built-in tracking feature that I could access to obtain statistical information about participant activity. *Rosetta Stone*, however, was delivered online and came with an administrator's portal that I could use to view details of participant activity, such as: login date, login time, time spent on task, tasks attempted, scores, and task status (i.e. complete, incomplete, or in progress). This was a useful tool particularly for verifying how often and for how long participants were logged on to their programs. Since the participants were working at the time and location of their choosing, and since our contact was intentionally infrequent, it was reassuring for me to have a way to verify that they were indeed using the program in line with what they were reporting in their diaries. At the outset of the study, I informed each participant working with *Rosetta Stone* that

I would be using this feature. I stressed that tracking was not meant to manipulate them in any way, as I was not checking to see if they were being “good” or “bad”; instead, the tracking feature was simply a data collection tool that would enable me to get a more complete view of their experience.

In terms of tracking features, the one available to me for *Rosetta Stone* was quite limited. Studies of learners working with CALL often incorporate much more sophisticated tracking features that record time per screen, mouse-clicks, incorrect answers, self-corrections, navigation patterns, usage of help and look-up features, and more (e.g. Liou 1997, 2000; Weinberg 2005, 2007). These types of tracking features can yield immense amounts of data to sift through and make sense of, and are probably more appropriate for answering research questions related to how learners respond to specific aspects of program design, and the acquisition of discrete units of the target language (e.g. articles), than for answering exploratory, open-ended questions related to learner experience, such as those proposed in the present study. As such, the *Rosetta Stone* tracking feature, with its limited capabilities was entirely sufficient for my purposes, and it was regrettable that a similar feature was not made available for *Tell Me More*.

3.9 Data analysis

Following from related work investigating learner experience using qualitative methods (Bordonaro 2003; Murday *et al.* 2008; Murphy 2008; Murray 1999a, 1999b; Oxford 2001; Stracke 2007; Umino 1999), I adopted a grounded approach to qualitative content analysis for the identification of recurring themes emerging from the diaries, interviews, and observations. In this way, I approached the data without *a priori* themes and categories, thus allowing the participants themselves to determine the factors significant to their experience. In this approach “[i]t is necessary to do detailed, intensive, microscopic examination of the data in order to bring out the amazing complexity of what lies in, behind, and beyond those data” (Strauss 1987:10). Bailey (1983) divides the process of qualitative content analyses with respect to diary studies into three steps (see also Silverman 2001):

1. To protect confidentiality, the researcher revises the texts (e.g. the diaries and the interview and observation transcripts) to conceal identifying features of the participants.

2. The researcher studies the texts thoroughly, carefully coding and recoding in order to identify recurring themes. The researcher identifies those themes that recur most often as being significant factors contributing to the language learning experience.
3. The researcher discusses these factors.

During the coding stages, I took several measures to minimize the issues with internal validity discussed above. Using Glaser and Strauss' (1967) constant comparative method, as described by Flick (1998) and Gibbs (2007), I carefully went through the three stages of coding used in this approach: open, axial, and selective. This methodical approach to coding allowed me to move from conceptual description (open coding), to the creation of thematic hierarchies (axial coding), to the eventual elaboration of thematic networks through a delimitation of the data and theme saturation (selective coding) (see Appendix E for examples of the coding process). A qualitative content analysis towards the end of the coding stages established the key themes. These themes were those shown to be the most saturated thematic networks present in the data. This methodical approach provided graduated steps and check points within the analytic process, hopefully helping to minimize researcher bias, and improve internal validity.

Moreover, during the coding stages of the analysis, the robustness of my coding schema and code assignment was tested in a coding exercise, in which I asked several colleagues to second-code an excerpt of the data in two stages. First, I asked colleagues to read through the excerpt and devise their own set of codes; thus capturing the themes they found to be most relevant. Second, I asked colleagues to use my coding schema to recode the excerpt. In both stages, there was a high degree of inter-coder reliability, addressing issues of internal reliability. In the first stage, many of the codes devised by my colleagues closely resembled mine. In the second stage, my colleagues applied my coding schema in a way that corresponded closely to my own coding of the excerpt. In one or two instances, codes suggested by my second-coders were incorporated into my coding schema, as I found them to be useful and insightful. For example, one second-coder suggested creating a category for instances in which the learners characterize themselves in terms of being good/bad/lazy/hardworking/etc. language learners. Consequently, I created the category "identity construction" and incorporated this into my analysis. While these types of constructions were not prevalent enough to become a key theme, they were

useful in highlighting learner beliefs and self-perceptions, which I incorporated, where possible, into the participant case files (see Chapter 4).

3.10 Epistemological framework

Harking back to the above discussion of “listening to the learner voice” (Conole 2008:124), the experiential focus of the research questions and the introspective and grounded nature of the research methodology belie an underlying epistemological framework that privileges the participant’s perception and description of her/his own experience above any externally-situated reality of self-instructed CALL. This framework, which I identify as belonging to an idealist/constructivist world-view as per Gibbs (2007), suggests that humans construct their experiences through narrative in order to draw sense from them. In the process of narration, experience is created and formalized. In this way, experiences give way to constructions and constructions come to represent an individual’s view of reality. Constructions may be particular to an individual (e.g. my baby is a genius), or shared among many (e.g. the earth is flat). Shared constructions are no more valid than idiosyncratic ones, they are simply more widely agreed upon. Thus, when adopting an idealist/constructivist framework for qualitative research, “we cannot say how the world is, only how some people see it” (Gibbs 2007:7). As Holstein and Gubrium (1997, in Silverman 2001:95) explain:

Construed as active, the subject behind the respondent not only holds facts and details of experience, but, in the very process of offering them up for response, constructively adds to, takes away from, and transforms the facts and details.

This framework is in contrast with a realist/positivist world-view, which suggests that reality exists independent of our experiences of it (Gibbs 2007). The goal of this world-view is to arrive at an objective reality, unobscured by human subjectivity and positionality. For the purposes of the present study, I reject the realist/positivist framework for positioning the experiencing subject as a reality reporter rather than a reality constructor, and for positioning the researching subject as a reality collector rather than a reality interpreter. Instead, within the context of qualitative research, I see the role of both the participant and the researcher as co-constructors of reality, who together, first through participant introspection, and then through researcher interpretation, make sense of experience together. As Holstein and Gubrium (1997, in Silverman 2001:97) argue:

Respondents' answers and comments are not viewed as reality reports delivered from a fixed repository. Instead they are considered for the ways that they construct aspects of reality in collaboration with the interviewer. The focus is as much on the assembly process as on what is assembled.

In this way, the following discussions attempt to remain ever-conscious of the ways in which self-instructed CALL has been experienced by the participants and interpreted by me, the researcher, in the present study. Gubrium and Holstein (1997, in Silverman 2001:39) suggest that qualitative researchers “inhabit the lived border between reality and representation”, and must tread a fine line between the two. While it is true that there are dangers waiting on either side of this balancing act, the solution is not to refrain from going forward; the solution is to proceed with great care, take modest steps forward, and stay grounded in the data.

3.11 Conclusion

This chapter provided a description and justification of the research methodology used in the present study. I first presented the research questions, followed by descriptions of the participants, the ethical considerations, the CALL software, the procedure, a discussion of validity and reliability as measures of rigour and merit, the research design, the methods of data collection (case-studies, diaries, interviews, observations, and online tracking), the methods of data analysis, and a discussion of the epistemological framework. The next three chapters discuss the findings of the present study, with each chapter addressing one of the three research questions respectively.

CHAPTER 4: Research question 1

4.1 Introduction

This chapter presents the findings of research question 1, which asks: What are the experiences of learners working with commercial CALL programs marketed for self-instruction? To answer this question, I present the 11 case-studies individually from inception to conclusion, highlighting the significant points that shaped the experience of each participant. The positive and negative aspects that had the greatest bearing on the final outcomes are discussed on a case by case basis. In particular, I attempt to present the reasons why the participant ultimately chose to cease her/his self-instructed CALL and drop out of the study. The points I identify as being “significant” are those identified by the participants themselves in the data and in subsequent communication. I first present an overview of the 11 participants, highlighting key details with regards to data collection for each individual as well as group totals (table 4.1), and then present each case-study in turn, in chronological order according to start date. Each case-study has been assigned a case motto (Flick 1998), or a typical quote from the participant that I feel represents a central aspect of their experience.

4.2 Overview of the participants and data collected

| “Name” | Program and language of study | Number of learning sessions and total time on task ² | Date of first and last diary | Number of diaries and word counts | Number of interviews and transcript word counts | Number of observations and time on task ³ |
|---------|-------------------------------------|---|------------------------------|-----------------------------------|---|--|
| Paul* | <i>Tell Me More</i> Spanish (v.9) | 7 N/A | Oct. 28- Dec. 4, 2007 | 7 1,519 | 1 4,139 | 0 N/A |
| Ahn* | <i>Tell Me More</i> French (v.9) | 6 N/A | Nov. 6- Nov. 22, 2007 | 4 1,080 | 1 2,598 | 0 N/A |
| Seri* | <i>Tell Me More</i> Spanish (v.9) | 2 N/A | Nov. 5- Nov. 18, 2007 | 3 1,076 | 1 1,703 | 0 N/A |
| Marc | <i>Rosetta Stone</i> Japanese (v.2) | 23 14:57:24 | Jan. 14- Apr. 23, 2008 | 23 16,351 | 2 3,539 4,422 | 2 00:17:24 00:12:34 |
| Shoko | <i>Rosetta Stone</i> Italian (v.3) | 15 17:03:54 | Feb. 3- Apr. 26, 2008 | 15 6,422 | 1 3,708 | 1 00:07:01 |
| Rilla | <i>Rosetta Stone</i> Mandarin (v.2) | 9 02:57:24 | Feb. 18- Mar. 12, 2008 | 9 1,559 | 1 4,927 | 1 00:13:37 |
| Mathieu | <i>Rosetta Stone</i> German (v.3) | at least 1 01:09:06 | N/A | 0 | 1 5,422 | 0 N/A |
| Cheng | <i>Tell Me More</i> French (v.9) | 10 N/A | Feb. 28- May 10, 2008 | 10 1,629 | 1 5,155 | 0 N/A |
| Li | <i>Rosetta Stone</i> German (v.3) | 7 06:24:14 | Mar. 10- Apr. 14, | 7 787 | 1 2,367 | 1 00:08:25 |

² Time on task is only available for participants who worked with *Rosetta Stone*.

³ Because much of the observation data was visual and not auditory, the observations were visually transcribed and analysed; therefore, it makes more sense to quantify them in terms of time on task rather than looking at the transcript word counts.

| | | | | | | |
|------------------------|---------------------------------------|---|--|--|---|---|
| | | | 2008 | | | |
| James | <i>Tell Me More French</i> (v.9) | 8 N/A | Mar. 21- Apr. 15, 2008 | 8 1,390 | 1 3,520 | 0 N/A |
| Heather | <i>Rosetta Stone German</i> (v.3) | 8 06:56:57 | May 12- July 5, 2008 | 7 1,712 | 1 4,476 | 1 00:11:26 |
| TOTALS | | | | | | |
| 11 participants | 2 CALL programs in 6 languages | ~96 learning sessions ~75:00:00 time on task (49:28:59 Rosetta Stone only) | Oct. 28, 2007- July 5, 2008 | 93 diaries 33,525 total words | 12 interviews 45,976 total words | 6 observations 01:10:27 time on task |

Table 4.1: Overview of the participants and data collection with totals

*Pilot study participant

4.3 Case 1: Paul

“I’m not a linguist.” (Paul, interview)

At the time of the study, “Paul” was a 41-year-old professional counselor who lived in Newcastle-upon-Tyne, UK. He was a native English speaker, born and raised in the UK. He elected to learn Spanish, a language that he claimed to already speak at a low-beginner proficiency level. He had had some experience learning Spanish in the past. The first occasion was during a holiday in Guatemala, where he spent several weeks living with a Spanish-speaking Guatemalan family and taking language classes during the day. The second occasion was upon his return to the UK, when he signed up for Spanish night classes. However, he stopped attending these classes after several weeks because he found he did not enjoy classroom learning, feeling that it was lacking in the authenticity that he had found so stimulating in Guatemala. He had since tried to learn Spanish on his own using the *Teach Yourself* audio series, but he found he had trouble staying motivated and felt he needed some outside pressure to keep him going. He reported that his main motivation for learning Spanish was to be able to converse with local people during his travels abroad. He claimed to have no knowledge of any other languages.

Paul began the program feeling very keen. When he heard about my PhD research project through word of mouth he quickly volunteered to participate with no prompting from me. In fact, when I expressed hesitation (because I knew him to be a very busy person), he was quick to reassure me that he would be a dedicated participant. Unfortunately, as it turned out, his participation did not extend beyond seven learning sessions, which was less than we had both hoped for, and he dropped the program after the completion of the pilot study, despite expressing interest in continuing on within the context of the main study. That said, of the three pilot participants, he did contribute the most to the study in terms of diary entries, number of learning sessions, and amount of time spent with the program. Paul spent a period of five weeks and two days working with the Auralog *Tell Me More* Spanish program (v.9). His diaries began on October 28, 2007, and finished on December 4, 2007. He participated in one interview, which took place on December 7, 2007, at my home, and lasted about 25 minutes. According to his diaries, he completed seven learning sessions with *Tell Me More* and submitted seven corresponding diaries. The learning sessions ranged from one to two hours, most often lasting about 1.5 hours. In both his diaries and the interview, Paul expressed himself easily, candidly, and with insight. Despite having very little previous language learning experience, Paul's occupation as a counselor, his MA degree, his extensive travels, and his intelligent, straightforward demeanor all seemed to foster within him an ability to look critically at both himself as a language learner, and the program.

From both the diaries and the interview, what emerged was that Paul saw himself as an inexperienced language learner (hence the case motto, "I'm not a linguist."), and this inexperience seemed to colour all of his interactions with *Tell Me More*. Of the three modes available in the program, he chose the Guided Mode "on the grounds that I didn't really have confidence in my own ability to set up a learning programme" (Paul, diary). Paul strongly believed that it was the program's responsibility to act as the teacher, and that he himself was unqualified to direct his own learning, revealing a feeling of low self-efficacy with regards to language learning. As well as having little experience learning foreign languages, Paul saw himself as having difficulty with words in general and as having little formal knowledge of English grammar, which he felt interfered with his understanding of the grammatical explanations offered by the program. For example, terms such as "articles", "acronyms", and particular verb tenses were unfamiliar to him, and he

found himself feeling as though he should be reviewing his English grammar before moving on to learning Spanish grammar. Moreover, the program's tendency to mark glossary items for part of speech and gender (e.g. "sust. masc.", i.e. "masculine noun") rather than supplying the appropriate article, as well as the program's tendency to replace pronouns within verbal paradigms with grammatical person information (e.g. "1ra pers. sing.", i.e. "first person singular")⁴ frustrated him, as he felt that it was important to his learning to see the articles and pronouns next to their nouns and verbs in order to better commit these to memory. In general, Paul felt that the program lacked transparency and took a lot for granted, for example, knowledge of Spanish vocabulary, knowledge of technical English grammatical terms, and knowledge of how to proceed with the various activities. He often wished he had someone he could turn to in order to clear up such ambiguities.

Paul seemed to have a strong sense of his own learning preferences, often referring to himself as a visual learner, and felt that *Tell Me More* did little to accommodate this sensory preference. For example, rather than listing vocabulary items in alphabetical order, he would have preferred to have seen vocabulary grouped thematically, such as displaying the parts of the body all together, perhaps as labels on an actual body⁵. He felt this would make learning the new words much easier. He often remarked on plans he had to work outside the program; for example, he planned to create his own vocabulary groupings in a workbook in order to present them for better visual learning, which he referred to as returning to "old methods of learning" (Paul, diary); however, he never did get around to doing this. He frequently questioned whether he should be working outside the program, using dictionaries, personalized word lists, and English grammar books, but again, he never did.

In terms of the program set-up, he described it as being like "a book of puzzles" (Paul, diary), which he tended to dislike. One of the activities that he found particularly frustrating was the crossword puzzle activity. On his first day of self-instruction he came across a crossword puzzle in which the English word was the clue and he was meant to fill in the Spanish translation. This, he found to be extremely difficult because the program had never taught these words, so, he questioned, how was he supposed to know them? He further questioned whether or not he was meant

⁴ This is the case for *Tell Me More* Spanish, but not *Tell Me More* French, which does include pronouns in verbal paradigms. This is perhaps because Spanish allows for pro-drop.

⁵ *Tell Me More* does include a feature wherein vocabulary is presented in semantic groupings; however, Paul was unable to access this via the Reference Tools menu, an issue discussed in Chapter 6.

to be working outside the program, perhaps using a dictionary to look up the words. Moreover, what he found particularly frustrating was that the words introduced were often words he felt were inappropriate for beginners, as they were taken from contexts not likely to be relevant for new learners (e.g. “wizardry”, “environment”). In terms of technical difficulties, he found the music irritating and spent some time trying to turn it off (unsuccessfully); he found the speech recognition software to be inconsistent and unstable, sometimes judging him too harshly, sometimes too leniently; he also found the completion dialogue box to be confusing, often indicating that he had only completed 25% when he could see nothing left to complete. This final technical problem was particularly frustrating due to his need to feel some sense of progress as he moved through the program.

It seemed that despite these technical problems and other frustrations, what kept him going was his ability to track his progress as he worked through the program by “ticking things off” (Paul, diary) on the completion screen, even if that meant completing several tedious crossword puzzles in a row. This sense of progress in the program became very important to him, and seemed to sustain him over his lengthy learning sessions, often lasting up to 1.5 to two hours. He found that the hardest part was actually sitting down and getting to work, but that once he was at the computer and working with the program “time [seemed] to fly” (Paul, diary), which he took to indicate that he was actually enjoying himself.

Overall, Paul had both good and bad things to say about his experience with *Tell Me More*. He stopped his self-instruction claiming to be no less motivated to learn Spanish, but feeling as though *Tell Me More* was not the best way to go about it, which is perhaps best explained by attribution theory, whereby Paul was able to maintain his motivation for learning Spanish by attributing his waning interest to an external, changeable factor (i.e. poor materials). Or perhaps what ended his self-instruction prematurely was not the program itself; rather the context of self-instructed CALL and its challenges were simply too demanding. Paul found that as he became busier and busier with his life and other commitments, self-instruction became less of a priority until it ceased all together.

4.4 Case 2: Ahn

“I wonder how can I create a similar pressure from the software?” (Ahn, diary)

At the time of the study, “Ahn” was a 23-year-old engineering postgraduate student who lived in Newcastle-upon-Tyne, UK. She was originally from Vietnam and spoke Vietnamese as her L1. She had been living in the UK for about a year. Prior to moving to the UK, she had spent several years living in Australia, pursuing undergraduate studies. As such, she was a proficient user of English in her day to day life and advanced studies. She elected to learn French, a language she claimed to already speak at a low-beginner proficiency level, having studied it in secondary school in Vietnam. She also reported having taken brief classes in Spanish and Japanese, but claimed to have very little proficiency in either of these languages. Her main motivation for learning French was general interest, and the possibility of spending a semester of her postgraduate degree at a university in France. She reported having used self-instruction in the past, primarily to improve her English language proficiency.

Ahn contacted me in response to a flyer I had put up at the Open Access Centre at Newcastle University. She was initially interested in learning German as part of the study; however, at that point I was just beginning the pilot study and had only the *Tell Me More* programs at my disposal, in French and Spanish. As she was keen to begin straightaway, and as I had no one yet signed on to look at the French program, I asked her if she would be interested in learning French for the time being, with the option of switching to German later, should she wish, once I had the *Rosetta Stone* German program available. She agreed (but never did switch to German, or continue on past the end of the pilot study). Ahn spent a period of two weeks and two days working with the Auralog *Tell Me More* French program (v.9). Her diaries began on November 6, 2007, and finished on November 22, 2007. She participated in one interview, which took place on December 6, 2007, at Newcastle University, and lasted about 15 minutes. According to her diaries, she completed six learning sessions with *Tell Me More* and submitted four corresponding diaries. On two occasions, Ahn chose to write up two learning sessions as a single diary entry, accounting for the missing two diaries. The learning sessions ranged from 45 minutes to one hour.

Due to the historical ties between Vietnam and France, French is spoken as a popular L2 in Vietnam, alongside English and other Asian languages, and as a result, Ahn had some knowledge of French going into the study, although she referred to this

as being “rusty” (Ahn, diary). This knowledge of French seemed to be both a help and a hindrance. She found the first level of the program too easy and repetitive, and was able to sail through. However, whenever she attempted to move up a level she found that her knowledge of French was not adequate and did not equip her with the language skills she needed to tackle a level of greater difficulty. She frequently commented that *Tell Me More* seemed to be designed to test rather than teach; that is, the knowledge she already possessed was tested, and at the lowest level she did well on these tests, whereas at higher levels she did not. When encountering new words and forms, she felt *Tell Me More* did nothing to teach her, and as a result, she did poorly on the more advanced tests.

To deal with this lack of teaching and to compensate for her “rusty” French, Ahn frequently mentioned the need to work outside the program by revising her French using textbooks, which she referred to as a more “traditional method” (Ahn, interview) of language learning. She had a set of textbooks that she felt were very useful, as these provided both activities presenting language in use (e.g. in dialogue form) along with grammatical explanations to unpack what was being introduced within the activities. This, she contrasted with *Tell Me More*, which presented activities without easily accessible grammatical explanations. For grammatical explanations, she either had to go to a different section of the program or pull up a new screen, but she found that by the time she had done this she had forgotten her original question and gotten side-tracked. She also mentioned having visited the library to borrow a book on French pronunciation to help her with the speaking component of the program. However, despite these aids, she felt unsure about how to proceed with her learning and how to balance working both inside and outside the program at the same time. Should she review with her books first, and then use the program? But, she reasoned, how would she know what to review until she encountered difficulties using the program? Should she use the program primarily and only occasionally turn to her books for help as she encountered difficulties? But, she noted, this would be time-consuming and distracting. Ultimately, what Ahn felt was truly lacking was a corresponding textbook to use alongside the program that would bridge this gap, as materials not designed to be used specifically with the program were a poor fit.

Another aspect of self-instruction that Ahn struggled with was creating and sticking to a consistent learning schedule. She frequently mentioned that she found it

difficult to regularly sit down and use the program, as she was very busy with so many other things, and self-instruction became less and less of a priority. As well as her French self-instruction, Ahn was participating in a Spanish class at the university. This class was non-credit bearing and would not affect her grades at university; however, she found it much easier to dedicate time in her busy schedule to learning Spanish than to learning French. She explained that this had nothing to do with marks, since neither endeavor would go on her academic record; rather, it was because in the classroom context the presence of other people stimulated her, encouraging her to go to class and keep up (hence the case motto, “I wonder how can I create a similar pressure from the software?”), perhaps revealing a performance orientation within the goal orientation theory of motivation. As she put it:

It’s just mainly that, you know, you know that people are there, so you don’t want to miss all the fun, or miss the session. Because you think ‘Okay, they, they are moving it, or they’re advancing, and I’m not.’ However, the software, it’s just, like, you know, it’s always there. So, you, you can just do, like, learn it wherever you want. (Ahn, interview)

What Ahn claimed to enjoy most about *Tell Me More* was the speech recognition software. She felt that learning to actually speak a foreign language was not possible from books, and required either classroom learning or specialist software. Moreover, she concluded that the program, with its speech recognition software, had a distinct advantage over classroom learning, as it provided the opportunity for endless attempts and repetition with tireless feedback from the computer.

Although Ahn expressed interest in continuing on with her French self-instruction after the winter exam period, she never did return to it. As a busy international student already juggling Vietnamese, English, and Spanish, she ultimately had second thoughts about her desire to learn French, and re-evaluated her initial goals for French proficiency. Instead of spending so much time and effort trying to master this language, she questioned whether or not a simple phrasebook, alongside her “rusty French”, would be enough to get her through her future planned travels to France. As her goals changed, her priorities changed, and as such, her French self-instruction was abandoned. Although she did have positive things to say about *Tell Me More*, particularly the speech recognition software, it seemed that the program’s tendency to test rather than teach, the lack of sufficient additional materials to assist her learning, and a busy schedule of competing demands proved to be obstacles too large to overcome.

4.5 Case 3: Seri

“I saw this as an opportunity to better myself, and I am confident that I can do it...” (Seri, diary)

At the time of the study, “Seri” was a 28-year-old linguistics postgraduate student who lived in Newcastle-upon-Tyne, UK. She was originally from Malaysia and spoke Malay as her L1. She had been living in the UK for two years and was a proficient user of English in her day to day life and advanced studies. She elected to learn Spanish, a language she claimed to already speak at a low-beginner proficiency level. She had had only a little experience with Spanish, mostly during her travels, and had never studied it formally. She reported that her main goal for learning Spanish was to correspond with a native Spanish speaking friend she had made while traveling, along with general interest and self-improvement. She had previously used self-instruction to improve her English language proficiency.

Seri contacted me in response to an e-mail I had sent around to a mailing list comprising mostly language and linguistics students at Newcastle University. She was keen to participate in the study if Spanish was available. I got her started with the *Tell Me More* Spanish program as part of the pilot study immediately. Seri spent a period of one week and six days working with the Auralog *Tell Me More* Spanish program (v.9). Her diaries began on November 5, 2007, and finished on November 18, 2007. She participated in one interview, which took place on December 6, 2007, at Newcastle University, and lasted about 15 minutes. According to her diaries, she completed two learning sessions with *Tell Me More* and submitted three corresponding diaries. On one occasion, Seri chose to write up a diary entry without having completed a learning session, as she had encountered some technical difficulty in installing the program, which accounted for the extra diary.

Seri’s most serious challenge with using the program was this technical difficulty that she encountered. *Tell Me More* is run from a CD-ROM, which must be inserted into a computer’s CD-ROM drive. Once running, the learner must install various components from the CD-ROM onto the computer so that the program will run smoothly. However, Seri’s preferred workstation was a university campus computer, which forbade student access to the CD-ROM drive and downloads. Because she was unable to use the program at her preferred workstation, Seri explained that she did not use it as much as she had hoped. Indeed, of the three pilot

study participants, Seri logged the least amount of time: only two learning sessions in contrast with Paul's seven and Ahn's six.

Very early in her diaries Seri established herself as an experienced language learner and applied linguist, revealing a feeling of high self-efficacy with regards to language learning. Both of these identities, she reasoned, afforded her an advantage over other self-instructed learners in terms of successful language learning (hence the case motto, which is embedded in the quote below). As she wrote:

I saw this as an opportunity to better myself, and I am confident that I can do it especially when I can consider myself to have a metalinguistic awareness. I know basically how languages work (having some knowledge on some theoretical organisation of a language really helps, especially the phonological stuff) and this enable me to make sense of any languages...I've read somewhere, saying that learning a second or even a third language is made easier especially if the learner made use of the existing knowledge of first language as scaffolding to assist the learning process. All this notion and assumption is what I have now (at this stage) and once again, I feel confident to learn. (Seri, diary)

It was with this identity of having language expertise that Seri approached all her interactions with *Tell Me More*. She seemed to seek out opportunities to factualize learning through the discovery of rules, patterns, and structures. For example, when faced with some ambiguity regarding Spanish sentence structure, Seri was quick to work outside the program, turning to an online explanation, which she proceeded to cut and paste into her diary for future reference. Another of Seri's favorite strategies was to look for English-Spanish cognates, and she seemed to take great pleasure in discovering these. In early diary entries, Seri frequently mentioned taking pleasure in self-instruction, using terms such as "fun" (Seri, diary) and "enjoyable" (Seri, interview).

Seri approached her Spanish self-instruction with multiple motivations. Among these she cited: self-improvement, the ability to tell others she speaks a third language, the ability to bargain for merchandise at Spanish markets while travelling, and the ability to correspond in Spanish with a native Spanish speaking friend she had met while abroad. Yet, despite these largely communicative goals, Seri maintained that an analytical approach to language learning was the best approach for her, where structure comes first, and communicative competence second.

Seri's main frustration with the program set-up was with respect to ambiguity in terms of feedback and how to proceed. There was little guidance in the form of

feedback. Often she felt unsure about whether an answer was correct or incorrect, wondering at times if it was a case of there being no correct answer, but, if so, feeling uncertain about why she might select one answer over another. Likewise, she often found that she had completed an activity and was uncertain about how to proceed and where to go next. She found herself just clicking randomly until some new activity popped up, but without a clear path through the program. This latter type of ambiguity might be on account of her having chosen the Free-To-Roam Mode, a mode she had chosen based on her self-constructed identity as an experienced, confident language learner. Regardless, these types of ambiguity became very frustrating for her, and made her feel like she was missing something, a situation she had not encountered before in the classroom context, where she had always been able to ask the teacher for feedback and guidance.

Perhaps the most difficult challenge of the self-instructed CALL context for Seri, and a challenge she was unable to overcome, was finding time to fit language learning into her busy schedule. Within the context of the pilot study, Seri believed that the reason she could not prioritize self-instruction was because she could not satisfy her environmental learning preference, that is, she could not use *Tell Me More* at her preferred workstation, which severely limited her opportunities to fit Spanish into her busy day. However, after the pilot study ended, I asked her if she would like to continue on as a participant in the main study using the newly acquired *Rosetta Stone* Spanish program. As *Rosetta Stone* was delivered online, Seri would have had full access to it on her campus computer, thus satisfying her environmental learning preference and hopefully increasing her opportunities for self-instruction. Seri agreed enthusiastically, and I set her up with an account and password on February 19, 2008. On this first day of having an account, Seri completed a 25 minute session. However, she did not write-up a diary to correspond with this session, and she never logged on again. I e-mailed her several times to ask her what her plans were for her self-instruction but I never heard back. There were no diaries and no interviews resulting from her participation in the main study. When questioned, her only explanation was that she was “very busy” (Seri, personal communication, March 3, 2008), but still had plans to do the Spanish self-instruction. I de-activated her account in May 2008 because I wanted to use it for a conference presentation, and needed to reassign the license to myself. I sent an e-mail notifying her of the deactivation, and she did not reply.

4.6 Case 4: Marc

“I do feel a real ambivalence when using the program.” (Marc, interview 1)

At the time of the study, “Marc” was a 30-year-old secondary school English teacher who lived in Newcastle-upon-Tyne, UK. He was a native English speaker, originally from Canada. Along with his teaching credentials, Marc had an academic and professional background in languages and language education, holding an MA in Applied Linguistics. He elected to learn Japanese in this study. He reported having had previous experience with this language, primarily consisting of a year spent living and teaching EFL in Japan, where he participated in Japanese language classes at a community center for two hours a week over a period of three months. Additionally, since leaving Japan, he had been trying to maintain and improve his Japanese proficiency through occasional self-instruction involving audio materials, flashcards, and textbooks, focusing mostly on literacy and the Japanese writing system. Despite his previous experience with Japanese, he self-assessed as working at a beginner proficiency level. He cited his main motivation for learning Japanese as being an interest in the culture and literature of Japan. Along with Japanese, Marc reported having completed 12 years of French immersion study in primary, middle, and high school.

Marc began the program feeling very keen. When he heard about my PhD research project through word of mouth, he quickly volunteered to participate, provided Japanese was available. As a result, I obtained the Japanese license from *Rosetta Stone* specifically for his use. I met with Marc on January 14, 2008, and got him started immediately. Marc spent a period of 14 weeks and two days working with the *Rosetta Stone* Japanese program (v.2). His diaries began on January 14, 2008, and finished on April 23, 2008. He participated in two interviews, which took place on March 9, 2008, and May 18, 2008, at my home, both of which lasted about 30 minutes. He also participated in two observations, which took place on March 10, 2008, and May 18, 2008, at the same location, and lasted about 15 and 20 minutes respectively. According to his diaries, he completed 23 learning sessions with *Rosetta Stone* and submitted 23 corresponding diaries. The learning sessions lasted between 30 minutes to one hour and 15 minutes. Of all the participants in the study, Marc was the most dedicated, staying on the longest, completing the greatest number of learning sessions, and logging the second greatest amount of time with the program. Moreover, his data set was the richest, most complete set, as he was the only participant to sit for

two interviews and two observations, which was made possible by his longevity in the study. Additionally, his diaries were particularly rich, in that they were often more than a page long (typed, 12 point font, single spaced), and touched on many themes relevant to his language learning experience, rather than being unfocused and tangential, as many of the diary entries of other participants were often apt to be.

Due to his longevity in the study, Marc's case is the most complex and most difficult to summarize. At many different points during his three month participation, Marc's feelings about *Rosetta Stone* changed (hence the case motto, "I do feel a real ambivalence when using the program."). Although he began keen, he also began with a cautious skepticism about the program's ability to teach him Japanese. However, due to the fact that self-instructed CALL and *Rosetta Stone* intersected with a great number of his interests (language learning, language teaching, Japanese, technology, computer software, and web design), he earnestly wanted to give the program a fair chance. Moreover, he was extremely keen to continue working on his Japanese studies, and beginning to feel as though his prior self-instruction efforts were no longer providing him with the motivation to sit down and get to work frequently enough. Likewise, he felt his prior self-instruction routine had been neglecting the speaking and listening skills of language learning. He reasoned that the easy accessibility of the online program, which allowed him to work around his very busy schedule as a high school English teacher, coupled with the interactive, colourful design of the activities would be enough to reinvigorate his Japanese language learning.

Marc's keenness and his skepticism existed side by side until eventually his keenness disappeared, leaving only skepticism behind, which soon transformed into a kind of cynicism. Where he once saw colourful pictures and innovative design, he began to see ways in which the *Rosetta Stone* developers had cut costs by recycling the same pictures over and over, not only using the same pictures for every language in the v.2 series (losing out on the opportunity for culturally-relevant pictures and resulting in a kind of hodge-podge of snapshots with a distinctly North American/international melting pot flavour), but also recycling pictures within a given language program. So, while a picture of a boy holding a ball over his head might be the correct match for the phrase "A ball on a boy" in one activity, it might also be the correct match for the phrase "A boy under a ball" in another activity, and the correct match for the phrase "The ball is on the boy" in yet another activity. Not only did

Marc find this repetition of pictures incredibly boring. but he found it became more and more difficult to distinguish the meaning of the recycled pictures because some pictures simply served to illustrate certain meanings better than others.

Marc's cynicism regarding the cost-cutting measures of *Rosetta Stone* extended beyond the interface to the program's underlying pedagogy. He referred to *Rosetta Stone* as using a "cookie cutter model" (Marc, personal communication, May 23, 2008), supposing that the developers had initially created a single language bank with illustrations in the form of pictures and cartoons and then had simply translated that bank into every possible marketable language. Responding to the claim that *Rosetta Stone* "teaches language naturally, the same way you learned your first language" (*Rosetta Stone* 2007f:iii) Marc argued that there was nothing "natural" about language learning on a computer, nor was the process of matching four pictures with four sentence prompts at all similar to how he had learned his L1. Moreover, while children have the opportunity to ask for clarification and modified input, as well as access to a great deal of contextual information to assist comprehension, as a *Rosetta Stone* learner, Marc did not. The result, for Marc anyway, was a great deal of ambiguity and frustration.

It would be useful to question why Marc lasted so much longer than any of the other participants. Along with his keenness, Marc set out feeling a real sense of commitment to the study. He claimed to be a man of his word, and having committed to something he knew to be of great importance to someone else, he did not want to renege on his commitment. In fact, it was me who eventually said to him, "If you're not enjoying it, stop! Please don't use the program grudgingly on my account". At this point, Marc had reported to me that he no longer sat down for learning sessions feeling keen to learn Japanese; rather, he did it to simply put in his time. As he wrote in what was to become his final diary entry, "My main reason for doing Japanese tonight was 'because I hadn't done it in awhile' and not quite because I was looking forward to doing it" (Marc, diary).

Despite his longevity, a total of 15 hours logged on *Rosetta Stone* over 23 learning sessions, Marc self-assessed that he had not learned very much Japanese. Because of his previous Japanese learning experience, he was able to work through the first unit or two mostly reviewing what he already knew, and thus building his confidence while easily completing activities. However, as he approached the third unit, and more and more new input was being presented, he began to understand less

and less of the activity content. He was still able to complete activities, often with high scores, but he felt this was a poor reflection of what he actually knew and had learned from the program, as he had developed plenty of strategies by this point to ultimately “click” the right answer, regardless of how well he knew the content. For example, by simply remembering which picture had not yet been used, the last of the four prompts was always a giveaway. Likewise, he became proficient at guessing which picture matched which prompt simply based on his understanding of one or two words in the sentence, even if he did not know what the sentence in its entirety really meant. He also became very efficient at comparing the pictures in order to determine the task objective, and used this information to correctly guess the match. He used other strategies as well, such as flipping back and forth between the answer and test screen modes, and using the kanji⁶ characters to assist him. With these strategies at hand, Marc rarely failed an activity, yet he claimed that his time with *Rosetta Stone* only taught him how to pass activities, and not how to communicate in Japanese.

Ultimately, despite his best intentions, Marc dropped the program with very little positive to say about it. The only thing Marc claimed that his time with *Rosetta Stone* had achieved was a slightly improved understanding of how kanji characters represent different meanings in a sentence. He reported that, while his motivation to continue learning Japanese remained, *Rosetta Stone* was not the way to go about it for him. As in Paul’s case, this may be best explained by attribution theory, whereby Marc was able to maintain his initial high levels of motivation for learning Japanese by attributing this disappointing outcome to an external, changeable factor (i.e. poor materials).

When informed that, of all the participants in the study, he was the one who stuck with it the longest, he replied:

I guess it makes me kind of question like then, well what’s the point of these programs if people don’t stick to them? Um, how could these programs help people stick to them more? Uh, and also I’d like to meet the kind of people who do stick to the program and find out what their secret is or, or what motivates them to stick to it. (Marc, interview 2)

To which I could only respond, “Me too”.

⁶ Kanji is the name for one of the three writing systems used in Japanese: it is a complex system of characters based on Chinese Han.

4.7 Case 5: Shoko

“It’s like wandering about in a strange place without a map.” (Shoko, diary)

At the time of the study, “Shoko” was a 40-year-old linguistics postgraduate student who lived in Newcastle-upon-Tyne, UK. She was originally from Japan and spoke Japanese as her L1. She had been living in the UK for about four years. Prior to living in the UK, she had spent two years living and studying English in the United States. As such, she was a proficient user of English in her day to day life and advanced studies. She elected to learn Italian, a language with which she claimed no previous experience. Along with English, she also reported having some knowledge of French, Russian, Chinese, and Latin. Her main motivation for learning Italian was her desire to travel to Italy in the near future. She had briefly experimented with self-instruction in the past to learn basic Russian, while living on a primarily Russian-speaking island in the north of Japan.

Shoko contacted me in response to an e-mail I had sent around to a mailing list comprising mostly language and linguistics students at Newcastle University. She was keen to participate in the study if Italian was available. As a result, I obtained the Italian license from *Rosetta Stone* specifically for her use. Shoko spent a period of 11 weeks and six days working with the *Rosetta Stone* Italian program (v.3). Her diaries began on February 3, 2008, and finished on April 26, 2008. She participated in one interview, which took place on April 16, 2008, at my home, and lasted about 30 minutes. She also participated in one observation, which took place on the same day and at the same location, and lasted about 15 minutes. According to her diaries, she completed 15 learning sessions with the program and submitted 15 corresponding diaries. The learning sessions ranged from 45 minutes to 1.5 hours.

Very early on in her self-instruction, Shoko reported deciding to switch from her usual perfectionist language learning approach to a more *laissez-faire* approach. That is, rather than focusing too much on getting high scores and going about learning Italian in a hyper-studious manner (e.g. checking textbooks and dictionaries when faced with ambiguity, making personal notes for review outside the program), she decided to suspend that side of her personality and trust the program to guide her through her language learning. When some aspect of the language content was unclear, she let it pass, hoping that it would become clear in a later activity. When she felt unsure about how to proceed with a given activity, she just tackled it as best she could, not worrying too much about the mistakes she made in doing so, not worrying

about how these ambiguities were reflected in her final scores (hence the case motto, “It’s like wandering about in a strange place without a map.”). Some days this new approach to language learning was easier to embrace than others. At times Shoko did find herself worrying about what she was learning (or not), but she generally reassured herself by saying, “I’ll just see what happens” (Shoko, diary).

Four aspects of the program in particular seemed to give Shoko the biggest cause for concern, and seemed to most threaten her new approach to language learning: the score as a representation of what she had learned, the usefulness of the language content being taught, the program’s ability to teach the four main skills of language learning, and the technical problems she encountered using the speech recognition software.

In terms of score, Shoko often wondered whether or not her score was an accurate representation of what she was learning. She found that she was able to obtain high scores without feeling as though she had mastered the language. She frequently completed an activity with a score above 90%, but feeling as though none of the content had really been learned by her in a way that would last. Similarly, when she got a lower score, perhaps 80%, she questioned whether or not this was a “good” or “bad” score. She wished she had some way of knowing for sure whether or not her score was an indication that she was progressing satisfactorily with her Italian studies. There was no one to ask, and no breakdown of scores in the program itself.

Shoko also questioned the usefulness of the content being introduced to her. She had expected a more conversationally-driven approach to language learning, with useful phrases such as “thank you”, “excuse me”, and “please” introduced early on. Instead, she was getting phrases such as “The cat is on the table”. She questioned the usefulness of “The cat is on the table” for her future travels to Italy. She was frustrated by a writing activity in which she had to spell the woman’s name “Giulia”. She did not understand how learning to spell “Giulia” could be a priority over learning to say “thank you”. She found this troubling, and remarked, “I haven’t learnt any useful phrases for conversation” (Shoko, diary).

In terms of a critique of the program in general, she worried about its ability to teach the four main skills, that is, listening, reading, speaking, and writing. The former two skills, being so-called receptive skills, were easy to practice using the program. Many of the activities involved listening to spoken input or reading written input. However, the latter two skills, being so-called productive skills, were less easy

to practice in the context of *Rosetta Stone*. As Shoko pointed out, speaking practice consisted of pronunciation practice, which is not the same thing as speaking with another person for communicative purposes. Writing practice fared slightly better in the program, but again, not in a dynamic, active way; rather it mostly consisted of practice with spelling, putting words in the correct order, and labeling pictures. Shoko worried that after 12 weeks of Italian study, she had only come to grips with the language in a receptive, non-communicative, non-dynamic way.

Shoko experienced only minor technical problems using the program, but even these seemed to have disrupted her learning significantly. The speech recognition software used in the speaking component had a difficult time recognizing her pronunciation of the phonemes /b/ and /d/. Shoko found she had to repeat words containing these phonemes many times, in different ways, at different volumes, in order to be recognized by the program. She found this frustrating and demotivating. At first she was unsure as to whether or not it was a technical problem or a pronunciation error, but after some time she decided that it must be a technical problem, based on the fact that it was only a problem for words containing these two particular phonemes, which she felt she pronounced well enough. Nevertheless, this repeated problem seemed to have really exhausted her patience with the program.

To deal with these issues, Shoko turned to her new *laissez-faire* approach to language learning, reminding herself not to worry and “just see what happens” (Shoko, diary). Shoko worked with the program for nearly 12 weeks, and was the second most dedicated participant in the study. She completed the first three units of the program, and occasionally expressed enjoyment and pleasure in the process. In particular, Shoko found she enjoyed learning new words, looking for cognates and borrowings from within the languages she already knew. She found many Italian borrowings in her native Japanese, and many shared cognates in English, French, and Latin. She frequently took advantage of the oft-cited temporal flexibility of self-instructed CALL in making use of the program late at night, or at convenient times when her housemate was not at home, and thus found a way to fit language learning into her already busy schedule.

Ultimately, however, Shoko discontinued her use of the program at the end of unit three. She felt she could only suspend her disbelief and her preference for a more studious approach to language learning for so long. No longer able to trust the program to effectively guide her through language learning and Italian self-

instruction, she ceased her participation in the study. She felt the program was useful to her as a very beginner, introducing her to many new words, sounds, and structures, but as her questions grew more complicated in terms of syntax and morphology, the lack of a person to whom she could direct these questions became a more severe liability of the program.

4.8 Case 6: Rilla

**“[I]f, um, I had not been...professionally curious, I would have dropped it.”
(Rilla, interview)**

At the time of the study, “Rilla” was a 46-year-old linguistics postgraduate student who lived in Newcastle-upon-Tyne, UK. She was originally from Germany and spoke German as her L1. She had been living in the UK for about two years. As such, she was a proficient user of English in her day to day life and advanced studies. She elected to learn Mandarin, a language with which she claimed no previous experience. Along with English, she also reported having some knowledge of French, Italian, and Greek. Her main motivation for learning Mandarin was her belief that it would soon assert its place next to English as an important world language, and she felt strongly that having some knowledge of Mandarin would prove essential in the near future. Alongside this language-driven motivation, was her professional curiosity with regards to self-instructed CALL. She had spent many years working as a teacher of EFL and German as a second language, and was intrigued by new approaches to language teaching and learning. She reported having used self-instruction once in the past in the form of audio cassettes, as part of her efforts to learn Greek.

Rilla contacted me in response to an e-mail I had sent around to a mailing list comprising mostly language and linguistics students at Newcastle University. She was keen to participate in the study if Mandarin was available. As a result, I obtained the Mandarin license from *Rosetta Stone* specifically for her use. Rilla spent a period of three weeks and two days working with the *Rosetta Stone* Mandarin program (v.2). Her diaries began on February 18, 2008, and finished on March 12, 2008. She participated in one interview, which took place on April 15, 2008, at my home, and lasted about 30 minutes. She also participated in one observation, which took place on May 6, 2008, at Newcastle University, and lasted about 15 minutes. According to her diaries, she completed nine learning sessions with the program and submitted nine corresponding diaries. The learning sessions ranged from 15 minutes to one hour.

Choosing Mandarin as the language of study might have been the greatest obstacle to Rilla's self-instruction. Had she perhaps chosen a language with less linguistic distance from the Indo-European languages with which she was already familiar, or had she already had some knowledge of Mandarin to help her get a grasp of the language and the program, she might have fared better. However, in choosing a language so very different from her own L1 and L2s, and in having absolutely no familiarity with Mandarin prior to beginning her self-instruction, Rilla struggled to make sense of the language and the program at nearly every step of the way.

For example, on Rilla's first day of self-instruction she was presented with the standard *Rosetta Stone* set-up of four pictures and four phrases, and she was expected, after very little introduction to either pictures or phrases, to match these together. There were no translations provided. The Mandarin input was not parsed in any way so as to indicate word order or parts of speech. Although she understood that her task was to match phrase to picture, the only way she could do this was to memorize each phrase as a chunk, and memorize its corresponding picture through trial and error. Because the pictures were ambiguous and often recycled in later activities to represent different phrases and meanings, she had no idea what exactly the phrases meant, let alone what the different morphological chunks making up the phrases meant. As a result, she found herself repeating the same activities over and over again trying to divine the meaning of the phrases. After a while, she became adept at matching phrases to pictures, but outside of this controlled context, she felt she would never be able to make use of those phrases in any meaningful or communicative way. She felt totally incapable of parsing the phrases into discrete units of meaning that could be used in other contexts. She felt nervous about the idea of repeating any of these phrases to native speakers, as she had no way of knowing what she was actually saying. She quickly grew frustrated and demotivated by this situation, losing confidence in both herself and the program's ability to teach.

Had Rilla chosen to brush up on her limited Italian rather than embark on Mandarin, I believe her experience would have been much different. She would have easily understood the early activities, resulting in a greater understanding of how to complete the later activities and proceed through the program; moreover, as she would have already had a sense of how to parse the morphological chunks, she would have recognized the word order and parts of speech, and she would have built on what she already knew more quickly and more easily simply because she would have been

able to make sense of enough language to aid her in learning the new content. However, in choosing Mandarin, she had quite a different experience.

She reported that she would have quickly dropped out of the study altogether after the first or second learning session, had she not felt a certain amount of professional curiosity about *Rosetta Stone's* approach to language teaching (hence the case motto, “[I]f, um, I had not been...professionally curious, I would have dropped it.”). Over the years as a language teacher and learner, Rilla had experimented with all kinds of different approaches. As a result, she was curious about the program, wanting to know where it would take her, and not wanting to give up before she had allowed enough time for the approach to take effect. In her diaries she reminded herself to follow the same good advice she had always given her own students, that is, “Don’t make the mistake of trying to learn 2 hours per week but take half an hour or even 15 mins daily or at least regularly” (Rilla, diary). Thus, Rilla often sat down for 15 minute sessions, repeating and reviewing what she had done during the previous session and attempting to move ahead. Rilla spent a lot of time reviewing the early activities, waiting for the patterns in the language to emerge, for the structures to clarify, for the chunks to make sense. In this way, she tried to build her confidence to move forward in the program. However, progress was extremely slow, a fact that frequently frustrated her despite her efforts to remain positive.

In contrast, there was one aspect of self-instructed CALL that Rilla reported having enjoyed immensely. Although she felt she had little sense of what was being said, she reported having enjoyed listening to the Mandarin native speakers, and found that after a learning session the musical quality of the language would stay with her throughout the day, sometimes even emerging in her dreams. Yet, despite her fascination with the sounds of Mandarin, when using the speech recognition software she frequently encountered technical ambiguity. Although her imitation of the native speakers sounded accurate enough to her own ears, it rarely matched up with the native speaker curve. Knowing Mandarin to be a tonal language, in which a rising or falling tone may be all that distinguishes one word from another, Rilla questioned whether her pronunciation was just a little off, or whether she was actually saying something altogether different from what she was meant to be saying. Of course, working alone, she had no one with whom she could verify this.

Ultimately, Rilla’s tolerance of ambiguity (in terms of technical problems, content, feedback, and how to proceed through the program) was only sufficient to

allow her to stick with the program long enough to satisfy her professional curiosity. She repeatedly mentioned that had the focus of this endeavor been linguistic proficiency, she would have quickly abandoned the program and moved on to the “safer” and “more rational” (Rilla, diary) approaches with which she was more familiar, such as the communicative approaches employed in many classroom settings. Although she conceded that *Rosetta Stone* may have some merit for certain learners, she reported that she would only recommend its use in tandem with classroom learning. A classroom teacher, she felt, could ostensibly fill in the gaps that *Rosetta Stone* left gaping so widely, by explaining how to complete the activities and answering content-related questions for the students as they encountered difficulties. *Rosetta Stone*, she claimed, might be a good resource in that context, allowing for endless opportunities for repetition and attempts at pronunciation. However, used alone, especially for learning a language so different from one’s own, with which one has no familiarity, it seemed that *Rosetta Stone* had little to offer even a learner as experienced as Rilla.

4.9 Case 7: Mathieu

**“[I]t’s great, I mean, it’s a good thing, but it’s quite mind-numbing sometimes.”
(Mathieu, interview)**

At the time of the study, “Mathieu” was a 24-year-old French and German as a second language secondary school teacher-in-training who lived in Newcastle-upon-Tyne, UK. He was originally from France and spoke both English and French as his L1s, as a result of having a native English speaking mother and native French speaking father. He had been living in the UK for about two years. Although he was training to be a teacher of German as a second language and had been studying the language quite intensely for two years, he elected to learn German for the purposes of this study, with the aim of maintaining and brushing up on his German fluency in order to improve his confidence as a language teacher. Moreover, he saw this study as an opportunity to both experiment with self-instructed CALL, which would be beneficial to him in his professional life, and to have a convenient means with which to continue his own German studies alongside his busy schedule. Along with French, English, and German, he also reported having some knowledge of Spanish. He had never attempted self-instruction in the past.

Mathieu contacted me in response to an e-mail I had sent to the coordinator of the German extension program at Newcastle University, enquiring into whether she knew of anyone who might be interested in participating in the study. Mathieu e-mailed me soon after, and was keen to participate in the study if German was available. As a result, I obtained the German license from *Rosetta Stone* specifically for his use, although after he dropped out of the study, German proved to be the most popular and in-demand language available for self-instruction, and I usually had a waiting list of participants interested in enrolling in the study when the German license became available.

Mathieu spent a period of about two weeks working with the *Rosetta Stone* German program (v.3). He participated in one interview, which took place on March 7, 2008, at Newcastle University, and lasted about 25 minutes. Although he made frequent mention of learning sessions he had completed and diaries he had written in response to e-mails I sent to him asking about these, he never actually submitted a single diary to me, and as such, I have only the interview transcripts to use as a record of his experience with self-instructed CALL and *Rosetta Stone*. According to the *Rosetta Stone* online tracking function, he spent a total of one hour and 10 minutes logged on to the program.

It seemed that the reason for Mathieu's early drop-out from the study and his lack of diaries could mostly be attributed to his extremely busy schedule. As a secondary school teacher-in-training, he was expected to put in full days at school and also devote many weeknights and weekends to the necessary preparations and marking that his teaching required. Alongside his professional responsibilities, he was also an active member of a football club, which meant going to practices several evenings each week. As a result, he found himself leaving his German self-instruction until quite late in the evening, and sitting down to it already feeling very tired after a demanding day. Whether or not he ever did write any diary entries is unknown. He claimed to have written some, but these were never passed on to me, although I gave him ample opportunities. When we met for our interview, I offered to take photocopies of hand-written notes after he explained that the reason he had not sent the electronic diaries was because he still needed to type up his notes. He said he had the notes with him, but then realized he had left them in the car. When I said I would wait while he went to retrieve them, he said the car was parked quite far away and assured me that he would send them to me electronically, but regretfully he never did.

Mathieu chose the intermediate level of the program, based on the fact that he was already quite proficient in German. He experienced no technical problems, but he was never able to attempt the speaking component, as he never got around to acquiring a microphone and headset for this purpose. In terms of his limited use of the program, Mathieu had mixed feelings about it. He seemed enthusiastic about its potential to review and practice material he had learned previously, but was not sure that the multiple choice and mouse-clicking design of the activities was a set-up he found particularly motivating (hence the case motto, “[I]t’s great, I mean, it’s a good thing, but it’s quite mind-numbing sometimes.”). He frequently found himself making mistakes, not because he did not know the material, but because his fatigue and impatience with the program led him to click on one response, when he was aiming for another. At other times, particularly in the spelling activities, he found himself perplexed as to why his answer was deemed incorrect, only to realize after some frustration that he had forgotten to capitalize a noun, as is standard in German. At these times he felt that the program could have done with a little more transparency in terms of “what” is incorrect and “why”, as errors such as a missing capital letter are relatively unimportant in terms of communicative purposes. Mathieu found the absence of any means to ask and get answers to questions to be a true disadvantage of the program. In contrast, he felt that the temporal flexibility, the quick pace of the activities, and the opportunity for endless repetition were the main advantages of self-instructed CALL and *Rosetta Stone*.

Ultimately, Mathieu’s experience with *Rosetta Stone* yielded little insight for this study, due to the lack of diary data and Mathieu’s very short period of self-instruction. As such, I only draw on his interview-as-data in a limited way to saturate themes that are more thoroughly supported by the data of other participants.

4.10 Case 8: Cheng

“[N]ormally in China, the, the language study is quite different from that software.” (Cheng, interview)

At the time of the study, “Cheng” was a 25-year-old ESL student who lived in Newcastle-upon-Tyne, UK. He was originally from China and spoke Mandarin as his L1. He had been living and studying in the UK for about a year. Prior to moving to the UK, he had been studying EFL in China for 13 years. As such, he was a proficient user of English in his day to day life. He elected to learn French, a language with

which he claimed no previous experience. His main motivation for learning French was for general interest. He claimed to have used self-instruction in the past to improve his English language skills.

Cheng contacted me in response to a flyer I had put up at the Open Access Centre at Newcastle University. He was keen to participate in the study if French was available. As I had already acquired a copy of *Tell Me More* French for the pilot study, I did indeed have this language available. Cheng spent a period of 10 weeks and two days working with the Auralog *Tell Me More* French program (v.9). His diaries began on February 28, 2008, and finished on May 10, 2008. He participated in one interview, which took place on April 29, 2008, at Newcastle University, and lasted about 40 minutes. According to his diaries, he completed 10 learning sessions and submitted 10 corresponding diaries. However, not all 10 sessions involved working with the program, as Cheng preferred to make word lists of vocabulary items introduced in the program and spend subsequent learning sessions memorizing these lists. Of the 10 learning sessions, only three involved the program and these lasted about one hour each. The remaining seven sessions consisted of vocabulary practice outside the program and these lasted between five and 30 minutes.

Cheng was quick to point out what he saw as the many advantages of self-instructed CALL and *Tell Me More*. In particular, Cheng appreciated the open-endedness of the program, allowing him to discover the language while progressing through the activities at his own pace, along with the speech recognition software, allowing for endless repetition and pronunciation practice. However, Cheng encountered two main points of conflict when using *Tell Me More*. The first was in terms of certain technical aspects of the program. The second was in terms of the teaching approach adopted by the program.

The first point of conflict Cheng seemed to struggle with was determining his progress and using the program for assessment. *Tell Me More* uses a progress bar to indicate the learner's completion rate of a given activity. Cheng noticed that his completion rate did not increase as he progressed through the activities. He could not see anything left to be completed, yet the progress bar indicated that he had completed 0%. Similarly, he encountered difficulties using the speech recognition software. Often he felt his pronunciation was more accurate than the program assessed it as being. He felt frustrated that he seemed to be unable to pronounce certain words to the program's satisfaction, and, of course, there was no teacher to ask for a second

opinion. Working alone, without the guidance of a teacher, it was difficult to know whether the incongruence was the result of a technical problem or the result of Cheng's difficulty with pronouncing certain words. This was a problem encountered by many participants in this study.

The second point of conflict Cheng seemed to struggle with was the teaching approach adopted by the program, which to him seemed highly disjointed and unsystematic. Cheng frequently compared this approach to the one his teachers used to teach him English in China, which he saw as being a more structured and studious approach to language teaching and learning, with a stronger emphasis on learning grammar rules and memorizing word lists (hence the case motto, "[N]ormally in China, the, the language study is quite different from that software."). Accordingly, Cheng tried to rework his French self-instruction to be more in line with this latter approach, as it was the approach with which he was most familiar and most comfortable. This can be seen in his diaries, the bulk of which record his efforts to work outside the program, memorizing the word lists he created for himself during his brief interactions with the program. While Cheng's implementation of a self-instruction strategy for vocabulary practice was useful in indicating his capacity for autonomous learning, this strategy came at the expense of a well-rounded approach to language learning, which would normally have involved more than just the spelling, pronunciation, and meaning of isolated vocabulary items. It seemed that his reluctance to engage with the program belied the otherwise largely positive comments he made about the program. Ultimately, his decision to abandon his French self-instruction altogether may have been on account of the poor fit between his language learning expectations (based on his experience learning English in China) and the teaching approach adopted by the program. As he explained:

I did not think this French self-study program is very good when I saw the first French sentence I did not understand. Because most Chinese student start with reading of alphabet when they study English. (Cheng, diary)

Equally possible, Cheng's participation in the study may have ended due to a conflict between us regarding the study requirements. His participation did not conclude decisively; rather, he simply stopped responding to my e-mails shortly after the interview. I believe this was perhaps on account of my concerns about the nature of his participation. After he implemented his strategy for self-instruction (i.e. memorizing the word lists outside the program), he ceased to write diaries, believing

that these mini learning sessions (often only lasting five to 15 minutes) were of no relevance to me, and deciding that he would instead write up the mini sessions as a single report. When I learned of these plans, I was quick to voice my concerns that a retrospective account in the form of a report was not the data I was hoping to collect; rather, I needed the diaries to be written immediately following each learning session. I reminded Cheng of the participant handout I had given him at our first meeting, in which I bluntly state, “If you are not writing diaries, you are not part of the study”. Cheng was apologetic and promised to send me his rough notes (from which he had planned to write up the report) immediately. He did, but shortly thereafter ceased all communication. I e-mailed him after a couple of months to let him know that I would be changing his status in the study from active to inactive, on account of not hearing back from him, but he did not reply.

4.11 Case 9: Li

**“[Y]ou’re just lost in a forest and you want to find a way out but you can’t...”
(Li, interview)**

At the time of the study, “Li” was a 19-year-old linguistics undergraduate student who lived in Newcastle-upon-Tyne, UK. She was originally from China and spoke Mandarin as her L1. She had been living and studying in the UK for about a year. Prior to moving to the UK, she had been studying EFL in China for six years. As such, she was a proficient user of English in her day to day life and advanced studies. She elected to learn German, a language with which she claimed no previous experience. Along with English, she also reported having studied French for about a year, but claimed to have very little proficiency in this language. Her main motivation for learning German was to complement her linguistics studies, as she recognized the strong connection between Old English and German, and felt that a general introduction to the German language would greatly benefit her understanding of Old English and the historical changes it underwent prior to becoming modern English. Additionally, she reported having positive feelings towards the German people she had met, and therefore wanted to learn a bit of their language. She claimed to have never used self-instruction in the past for the purpose of language learning.

Li originally contacted me in February 2008 in response to a flyer I had put up at the Open Access Centre at Newcastle University. She was keen to participate in the study if German was available. As I had already acquired a copy of *Rosetta Stone*

German for a previous participant, I did indeed have this language available. However, German proved to be the most popular language available for self-instruction, and at the time Li requested it, there was already a participant using this license (Mathieu). I explained that it would be at least a two to three week wait, and Li responded that she had no problem waiting for the license to become available. As a result, she began her self-instruction in March 2008, approximately one month after she had initially volunteered. Li spent a period of five weeks working with the *Rosetta Stone* German program (v.3). Her diaries began on March 10, 2008, and finished on April 14, 2008. She participated in one interview, which took place on May 6, 2008, at Newcastle University, and lasted about 20 minutes. She also participated in one observation, which took place on the same day and at the same location, and lasted about 10 minutes. According to her diaries, she completed seven learning sessions with the program and submitted seven corresponding diaries. The learning sessions lasted about one hour each.

Although Li embarked on her self-instruction feeling very keen, she soon took issue with several design features of *Rosetta Stone*, and these proved to be the issues that would ultimately push her to drop out of the study. Along with encountering frequent technical problems with the program, which caused her computer to freeze in the middle of activities, Li encountered three main deal-breakers with the program. These related to: lack of grammatical explanations, lack of English translations, and lack of control over pace.

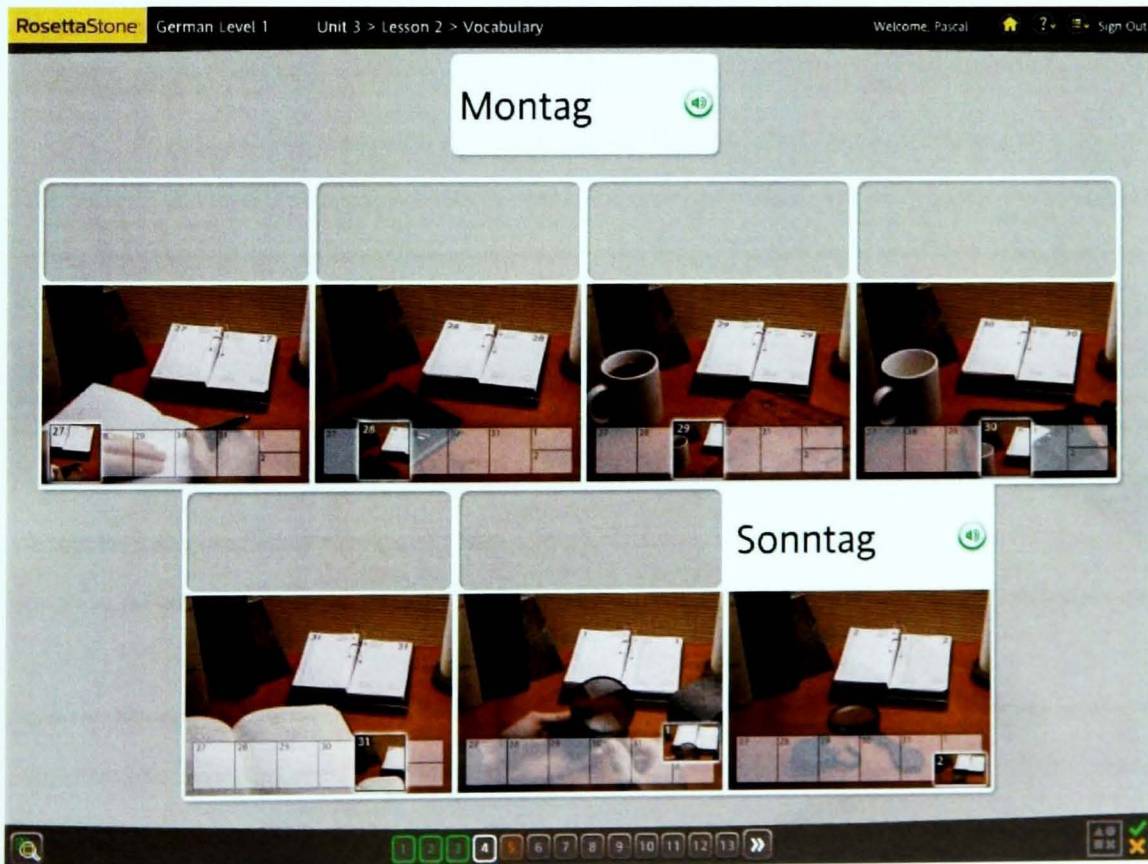
The lack of grammatical explanations provided by *Rosetta Stone* was a seemingly insurmountable problem for Li. After having studied EFL for many years in China, she had grown quite comfortable with a teaching approach that rested heavily on learning a language through learning the structural and grammatical rules that govern that language. As she put it:

I'm not the teacher, I don't have to summarize all the rules for myself. I need someone to summarize the rules for me and then I just, you know, memorize them and apply them in, in my language learning. But for this program it's just like you discover the rules. (Li, interview)

For example, early into her German self-instruction a particular writing activity was the source of endless frustration for Li. After she had attempted the activity by typing in the German phrase, the program told her that she was incorrect, but failed to point out the source of the error. She made repeated efforts to correct the phrase, but her

answer continued to be marked as incorrect. Several days later in an historical linguistics class, the tutor explained that the first letters of nouns are capitalized in Old English. Li immediately made the connection that the same might be the case for German, due to the connection between the two languages. During her next *Rosetta Stone* learning session she tested out this hypothesis, and, indeed, she was correct. However, rather than feeling proud of her accomplishment (i.e. having figured out the rule on her own), this experience only reinforced her frustrations, and she lamented that so much time had been wasted on such a small detail. She felt that the program should have provided her with this information explicitly at the first instance of her making the error. For Li, this experience was perhaps the beginning of the end. Corrective feedback and grammatical explanations, she believed, are not optional in language learning, they are essential.

The lack of English translations also proved to be a major obstacle for Li. As a result of the program’s approach of using pictures to illustrate the meaning of the target language input, Li found herself quite misled when she incorrectly interpreted a series of pictures. During the observation, I watched her struggle with an activity that looked like this:



Perhaps because I have studied basic German and I recognized the words “*Montag*” and “*Sonntag*” to be days of the week, I knew the answers. Moreover, I knew that the numbered boxes at the bottom of each of the seven multiple choice options were meant to represent one calendar week (beginning on Monday the 27th and ending on Sunday the 2nd). Li did not. She was unfamiliar with the language input and she did not recognize the calendar week portrayed in the pictures. She expressed extreme frustration to me, not knowing whether or not these words were supposed to be representing numbers or what they meant. As a result, she guessed wildly to get through the activity, getting mostly incorrect answers. Eventually, through guessing, she concluded that “*Montag*” and “27” were meant to go together; however rather than realizing that “27” was meant to represent a day of the week (i.e. “*Montag*” or “Monday”), she concluded that “*Montag*” must be the German word for the numerical value 27. This conclusion bewildered her, as she could not see how the word “*Montag*” could mean “27”, yet she could not see how it could mean anything else.

This was an example of one of the most troubling instances of ambiguity reported to me by a participant. In this situation there was no learning happening, only rapid demotivation as the participant floundered totally unsupported by the program (hence the case motto, “[Y]ou’re just lost in a forest and you want to find a way out but you can’t...”).

The third and final deal-breaker for Li was the lack of control over the pace of the activities. Understandably, in the self-instructed CALL context with its oft-touted temporal flexibility, it was frustrating to learn that the program did indeed come with a mind and pace of its own. Li found that the program moved too quickly, with new prompts appearing and screens changing before she was able to spend the time she felt she needed with the material. She found the rapid pace especially challenging in light of the fact that she was supposed to be deducing the grammatical rules on her own, without explicit explanations.

Ultimately, these deal-breakers were enough to cause Li to drop out of the study. She was left feeling frustrated and totally demotivated to learn German. When asked to self-assess what she had succeeded in learning after five weeks of self-instruction, she replied, “I found that the [first] letter [of nouns must be capitalized]” (Li, interview).

4.12 Case 10: James

“So far it’s hard going because I feel so stupid, like being at my first day at school...” (James, diary)

At the time of the study, “James” was a 61-year-old technical writer of computer manuals who lived in Alnwick, UK. He was a native English speaker, originally from the United States. He elected to learn French, a language he had studied previously in high school and adult night classes, as well as having taken advantage of *in-situ* practice during holidays in France. Despite this previous experience, James assessed his French proficiency level as being basic, and primarily conversational. His main motivation for learning French was to generally improve his L2 proficiency for personal fulfilment. He reported having used self-instruction once in the past, when he signed up for a scheme to help UK government employees learn foreign languages. Through this scheme he received a complete set of the *Linguaphone* French audio programs. He reported having attempted to use the programs once or twice, but never having advanced past the introductory section.

James contacted me in response to a flyer I had put up at the King George VI Building at Newcastle University. He was keen to participate in the study if French was available. As I had already acquired a copy of *Tell Me More* French for the pilot study, I did indeed have this language available. James spent a period of three weeks and four days working with the Auralog *Tell Me More* French program (v.9). His diaries began on March 21, 2008, and finished on April 15, 2008. He participated in one interview, which took place on June 2, 2008, at Newcastle University, and lasted about 20 minutes. According to his diaries, he completed eight learning sessions with the program and submitted eight corresponding diaries. The learning sessions ranged from one to 1.5 hours.

James began the study with some reservations. Unlike my other participants, who had all assured me that they foresaw no obstacles to their successful participation in the study, James was not optimistic about his ability to improve his French proficiency, revealing a feeling of low self-efficacy with regards to language learning. He also expressed feeling intimidated by the diary component of the study, identifying himself as not being the sort of person who can use writing for reflection (hence the case motto, “So far it’s hard going because I feel so stupid, like being at my first day at school...”). Despite these reservations, his interest in participating was sincere and he decided to make the effort.

James experienced many ups and downs working with the program. He struggled to get the speech recognition software to work properly and to recognize his pronunciation in the speaking component. Faced with this difficulty, he questioned whether it was a technical problem or his own short-coming (i.e. Was he going deaf? Was it his age? Were his ears no longer tuned in to foreign language pronunciation?). He encountered various activity types that he did not enjoy on account of them focusing on skills he felt to be lacking in himself. For example, he dreaded crossword puzzles, as they focused so heavily on spelling, a skill that he considered to be a major weakness on his part. Working on his weaker skills proved to be both motivating and demotivating at different times; it was motivating when he surprised himself and did well and demotivating when he did poorly and struggled to complete the activity. He experienced a clash in terms of what he had expected the program to teach and what it actually taught. Embarking on self-instruction, James had anticipated a more conversational approach to language teaching and learning, as this was the approach with which he was most familiar and most comfortable. However, after a few sessions with the program, he quickly realized that it was not designed to be conversational; rather, it was designed with a heavy emphasis on spelling and pronunciation. This resulted in a poor fit for his language learning goals, which were largely conversational, although he did recognize the benefit of brushing up on his French literacy skills as well, though preferably in tandem with his conversational skills.

Despite these ups and downs, James' diaries are, overall, extremely positive, expressing feelings of growing confidence, pleasure, and even pride in his accomplishments. It seemed that none of the ups and downs he encountered were ultimately responsible for him dropping out of the study. In James' case, whose last actual learning session took place on April 15, 2008, but who did not officially become inactive in the study until well into the following September, it seemed that his busy life simply got in the way. Shortly after April 15, 2008, he was notified by his employer that he would be participating in some work-related training, which involved an intensive two week course, followed by a period of exams based on this course. Between the course and the exams there was a period where he would have to study independently to ensure he passed the exams. This professional responsibility naturally took precedence over the study, and he notified me that he would have to put his participation on hold for a couple of months until he had the time to return to his French self-instruction. I contacted him again in July 2008 to see if he had resumed

his self-instruction; he had not, citing other obligations as monopolizing his free time, but still insisting that he would be resuming in due course. I contacted him again in September 2008 to see if he had resumed; he had not, and this time he expressed regret that he was simply too busy to do so, and asked if I would change his status in the study to “inactive”, thereby marking the end of his participation. James was the final participant to drop out of the study.

4.13 Case 11: Heather

“[Y]es but I’m not a baby I’m a grown-up.” (Heather, interview)

At the time of the study, “Heather” was a 61-year-old research psychologist who lived in Alnwick, UK. She was a native English speaker, born and raised in the UK. She elected to learn German, a language she had previously studied, off and on, for more than five years at school, as well as frequently using it in her professional life, within the context of professional conferences in Switzerland and Germany. Despite this extensive previous experience, Heather assessed her German proficiency level as being “basic and dismal” (Heather, personal communication, May 8, 2008). Along with German, she also reported having some knowledge of French, Greek, and Latin. Her main motivations for learning German were her strong feelings about the benefits of having one or more L2s, and her “desperate desire” (Heather, personal communication, May 8, 2008) to command German at a greater level. She reported having used self-instruction intermittently in the past to improve her L2s, primarily through the use of textbooks and authentic literature in the form of magazines.

Heather originally contacted me in March 2008 in response to a flyer I had put up at the King George VI Building at Newcastle University. She was keen to participate in the study if German was available. As I had already acquired a copy of *Rosetta Stone* German for a previous participant, I did indeed have this language available; however, German proved to be the most popular language available for study, and at the time Heather requested it, there was already a participant using this license (Li). I explained that it would be at least a six to eight week wait, and Heather responded that she had no problem waiting for the license to become available. As a result, she began her self-instruction in May 2008, approximately two months after she initially volunteered. Heather spent a period of eight weeks and one day working with the *Rosetta Stone* German program (v.3). Her diaries began on May 12, 2008, and finished on July 5, 2008. She participated in one interview, which took place on

July 8, 2008, at Newcastle University, and lasted about 30 minutes. She also participated in one observation, which took place on the same day and at the same location, and lasted about 15 minutes. According to her diaries, she completed eight learning sessions with the program and submitted seven corresponding diaries. On one occasion, Heather chose to write up two learning sessions as a single diary entry, accounting for the missing diary. The learning sessions ranged from 45 minutes to one hour.

Heather began her German self-instruction feeling exceedingly keen. She felt it would be the perfect opportunity for her to build her vocabulary and strengthen her grammatical knowledge, serving as both a review of old material and an introduction to new material. However, she encountered three main problems with the program, the first of which she seemed willing to work through, the second and third of which were ultimately deal-breakers for her, and resulted in her dropping out of the study.

First, she encountered technical problems. Of all the participants in the study, Heather was the least computer-savvy. It was perhaps because of this that she frequently encountered difficulties using *Rosetta Stone*, and experienced great frustration when this occurred. To her advantage, her husband happened to work in the information technology industry and she was often able to recruit his help. However, in many cases, the problems she was facing were not technical problems *per se*; the program was running as it should have been. Rather, these were instances of user-unfriendliness. Sometimes it was a matter of not being able to locate the right button to get the program to do as she wished; sometimes it was a matter of not remembering how to log on. These sorts of difficulties seemed to present themselves to Heather regularly, and undoubtedly reduced her motivation to continue using the program.

However, the two main deal-breakers for Heather proved to be lack of explicit morpho-syntactic/grammatical explanations and what she came to see as her personal incompatibility with *Rosetta Stone* due to her preferred way of encoding written and visual input in her memory. The former was mentioned in her diaries from the very beginning. Heather frequently expressed frustration when she encountered morpho-syntactic forms that did not match up with her already possessed grammatical knowledge. She longed for explicit explanations accounting for the new forms and frequently turned to her textbooks for support. She saw the program's lack of printed materials to be used alongside the activities for quick reference to be a major

shortcoming, and accounted for this by working outside the program with her own materials. In this way, she often contrasted *Rosetta Stone's* approach to language teaching and learning with studious approaches she saw as being more traditional, more logical, and certainly more familiar to her (e.g. using paper dictionaries and textbooks for grammatical explanations).

The second deal-breaker did not surface until the final diary entry. She had just returned from a conference in Zurich, prior to which she had been looking forward to testing out her newly honed German skills *in-situ*. However, at the conference she found herself struggling to recall the new vocabulary items she had learned during her German self-instruction. When trying to remember the words introduced in *Rosetta Stone*, she found she could only recall the pictures. She could clearly envision images of women, their hair colour, what they wore, where they were standing, but could not summon the German input accompanying the scene. She concluded that the vivid images, which she otherwise greatly enjoyed, had overwhelmed her ability to encode the language, leaving her with only a memory of the pictures and no words to go with them. In contrast, she felt that her textbooks, which generally required her to supply to own mental images to accompany input, were much more effective in helping her to recall new words, forms, and structures. Once she had come to this conclusion, Heather dropped out of the study, certain that *Rosetta Stone* could not provide her with the kind of learning she needed.

As a learner, Heather described herself as being extremely impatient, and in line with this, she tended to rush through activities, often making careless mistakes in her haste and admonishing herself for it later. Moreover, she struggled with the pace of the activities, feeling they were not allowing her the time she needed to reflect on the language input. Additionally, she seemed to have a very low tolerance of ambiguity. Anytime a form popped up that she did not understand, or a word for which she could not unpack the morphology, she longed for immediate clarification, the kind of clarification that was not forthcoming from *Rosetta Stone* (hence the case motto, which is embedded in the quote below). In response to the claim that *Rosetta Stone* teaches L2s the way babies learn their L1, she replied:

[Y]es but I'm not a baby I'm a grown-up. And as a grown-up I need, I have a curiosity that I didn't have when I was a baby and I have a curiosity to understand and analyze what is being given to me. So I can't become as a child, as a baby, and so it wasn't satisfying my adult mind that wanted to understand. (Heather, interview)

This impatience, this intolerance of ambiguity, and the three main problems presented above, compounded to demotivate Heather to the point where she dropped out of the study altogether. Ultimately, the only real advantage Heather saw in *Rosetta Stone* over her preferred textbook-based learning was the speech recognition software and the opportunity to practice pronunciation through endless repetition. However, that was not enough to persuade her to continue on. She left the study expressing certitude that there were learners out there for whom this program could be very helpful, but that she was not one of them.

4.14 Conclusion

This chapter presented the findings of research question 1, which asked: What are the experiences of learners working with commercial CALL programs marketed for self-instruction? To answer this question, I presented the 11 case-studies individually, highlighting the significant points that shaped the experience of each participant. Although I discussed both positive and negative aspects of the experiences, I paid particular attention to aspects that seemed to have contributed to the participant's decision to cease her/his self-instructed CALL and drop out of the study. These fell into two general categories: the competing demands of a busy schedule resulting in a lack of time for self-instruction (i.e. "too busy for self-instruction"), and a belief that the program was inadequate for language learning or not well-suited to the participant (i.e. "dissatisfied with their CALL programs"). In most cases it was a combination of these that ultimately caused the participant to drop out of the study.

This chapter presented the case-studies individually in order to portray each participant's experience with self-instructed CALL from inception to conclusion. However, another useful way to examine the case-studies is through the common themes shared between them. In the next chapter, addressing the second research question, I present the five key themes that emerged from an analysis of the data.

CHAPTER 5: Research question 2

5.1 Introduction

This chapter presents the findings of research question 2, which asks: What common themes emerge as most relevant to shaping the learners' experiences? Five key themes emerged from an analysis of the data. These are: need for increased self-discipline, dealing with technical problems, encountering ambiguity, working outside the program, and questioning the program's ability to teach. These themes represent the most heavily saturated categories arising from a careful coding process and qualitative content analysis, and, as such, bring together common experiences shared by the participants (see Appendix E for examples of the coding process).

5.2 Key theme 1: Need for increased self-discipline

Reflecting a very common finding in the self-instruction literature (Jones 1994, 1995, 1996; Murday *et al.* 2008; Murray 1999a, 1999b; Stracke 2007; Umino 1999; Ushida 2005), the participants all experienced a need for increased self-discipline to engage regularly with their CALL programs. For Ahn, this was a need that came in stark contrast with her experience with classroom-based learning. At the time of the study, she was also enrolled in a non-credit Spanish as a second-language module, which she found easier to attend to regularly than her French self-instruction.

It's just mainly that, you know, you know that people are there, so you don't want to miss all the fun, or miss the session. Because you think 'Okay, they, they are moving it, or they're advancing, and I'm not.' However, the software, it's just, like, you know, it's always there. So you, you can just do, like, learn it whenever you want. (Ahn, interview)

For Ahn, temporal flexibility, which is often described as one of the great advantages of self-instruction (Dickinson 1987), appears to enable procrastination in a way that classroom-based learning does not. The self-instructed learner is not only free to determine when learning will take place, s/he is *obliged* to do so. In this way, the increased freedom of self-instruction can actually be experienced as an obstacle to success.

[I]f I try the program last day then I tend to, like, repeat, come back in the next day. But if I just leave that for a longer, then I'll be, like, 'No, it's taking too much time' ...I find it would be better if I had, sort of, like, you know, be disciplined and keep it on a regular basis, rather than just, like, you know, do it whenever I feel like. (Ahn, interview)

Although Ahn recognized the need for increased self-discipline, especially in terms of setting up a regular schedule and following it, she found that other commitments kept getting prioritized ahead of her French self-instruction.

I just realized that I have been neglected my French studying for quite a while. Maybe I should set up a regular timetable for French and stick with it. Currently, all the assignments keep coming in and I find myself constantly chasing one after the other...I wonder how can I create a similar pressure from the software, haha? OK, maybe I just need to be more disciplined and self-motivated. (Ahn, diary)

The competing demands of a busy schedule are also cited by Paul, Seri, Mathieu, Cheng, and James as reasons why they were unable to regularly find time for their learning sessions. At the time of the study Paul was interviewing for a new job, and found he had less time for his Spanish self-instruction than he had hoped.

I've probably not done as many [sessions] as I could have done, but that's been part of other distractions. Time-wise, in terms of interviews, and just general things. (Paul, interview)

Seri was a busy postgraduate student juggling credit-bearing modules and original research.

[T]hings with the Spanish learning CD is good so far, but I have to tell you the truth, I've only used it for three times because of time constraint. (Seri, interview)

Along with his full time studies to become a French and German as a second language secondary school teacher, Mathieu was completing his teaching practicum at the time of the study, which meant an extremely hectic schedule.

I've been very, very busy at the minute, and I haven't had much time to use the software. I apologize for that. I mean...But from like, my problem, my teaching to do, just, I've got like 17 hours a week at the minute to teach and prepare lessons and I've also, like, the theoretical aspect to apply and I, I've got a project to do on behaviour management classroom control, so I have to search at the same time, do a research project at the same time as I teach and plan lessons and review with my mentor and get feedback back from it. So, it's quite hectic. I've got like, 45, 46 hours a week full work, every day. (Mathieu, interview)

Likewise, Cheng found his full time credit-bearing studies interfered with his good intentions for his French self-instruction.

I started to prepare my project and presentation last week. So, it is a little bit hard to find time to study French recently. (Cheng, diary)

James learned shortly after beginning his French self-instruction that he had to undertake some professional training at work, which meant he had no time or energy to spare.

I haven't done it, for what, sort of 3, 4 weeks now...It's just other things have sort of stopped me from actually sort of getting on and sort of doing it...[U]nfortunately I'm having to take, uh, some professional exams at work. Uh, and I was locked away on a fortnight's course, very intensive course, and I, it just couldn't do anything, honestly. I was just sort of totally wiped out. Uh, and the thing is, is I have to sit, uh, this exam in a fortnight's time. So. And it's a hands on exam so there's a lot of practical things. So I'm having to spend a lot of time sort of learning or sort of redoing what I've learned to make sure that I sit, you know, pass the exam. So that's why I haven't been able to do this. (James, interview)

However, the participants' inability to engage in self-instruction regularly does not always seem to be related to a dislike for the programs, rather a struggle to muster the self-discipline necessary to fit learning sessions into a busy schedule. For example, despite his other commitments, Paul found that when he did find the time to "sit down to do it", he sometimes enjoyed himself.

I have enjoyed the session even after the slow start and again time seems to fly by which for me is a sign I am enjoying it. Motivation levels are OK when I sit down to do it, but job interviews and such have slowed me down. (Paul, diary)

Unfortunately, when participants did "sit down to do it" they often had to deal with technical problems that prevented them from easily using their CALL programs. I present this key theme in the next section.

5.3 Key theme 2: Dealing with technical problems

Tell Me More and *Rosetta Stone* offer technical support in the form of toll-free hotlines and online requests; however, none of the participants took advantage of these and instead chose to either ignore their technical problems or troubleshoot problems themselves. The most common types of technical problems were: glitches, installation difficulties, and problems with the speech recognition software.

5.3.1 Glitches

The levels of computer expertise among the participants varied from highly proficient users working in the IT industry to novice users, though the majority of the participants were situated somewhere in between. The more computer-savvy participants negotiated glitches with relative ease, as in the case of James.

Found that the program kept locking up. Went to the web site and found a couple of fixes. Applied both fixes and guess what? The program no longer locks up. (James, diary)

Using the help available on the program's website was one way of dealing with glitches. For less computer-savvy participants, troubleshooting often involved restarting the computer, or using the "control-alt-delete" command to end the program. Li attempted the latter when her program froze on more than one occasion.

Li: I don't know whether it is my computer's fault but my computer seldom stopped the program. It's just like the program goes like, um, when I was doing the grammar session goes to page 17 and then just stopped. And I want go to page 18 and when I click page 18 just no, just not go there and...

I: Like did it freeze?

Li: Yeah, it just like the program don't go, you know, yeah freeze. Yeah, that's a freeze and I just have to it's like control-delete and [alt] and I just stop the program. (Li, interview)

These glitches were the cause of a lot of frustration among the participants. Trying to learn a language without a human teacher was hard enough for some learners; add to that the challenge of trying to deal with technical problems without turning to human technical support, and many participants ended up feeling extremely discouraged. Marc, for example, gave up during one session, when a glitch resulted in him failing a lengthy activity.

I experienced my first glitch this evening. I was going through a 'writing' task...which takes longer than most other tasks because you have to piece together 40 sentences. I was just over three quarters of the way through and had 77.5 percent right, when there was a page error. When I refreshed the page, the exercise started again from the beginning...That work has been lost, and I was 2.5 percent away from 'passing' that task. (Marc, diary)

5.3.2 Installation difficulties

Several participants using *Tell Me More* encountered installation difficulties. This program is run from a CD-ROM, which must be inserted into a computer's CD-ROM drive to run. Once running, the learner must install various components from the CD-ROM onto the computer so that the program will run smoothly. However, Seri's preferred workstation was a university campus computer, which forbids student access to the CD-ROM drive and downloads. Because she was unable to use the program at her preferred workstation, Seri ultimately did not use it as much as she had hoped.

This was my second trial of running the [CD-ROM], I can't install it into the computer in the university, which is rather disheartening, since I spend most of my time in the office and it would be a good 'get away' tool after squeezing my brain with formants and speech rhythm most of the time. (Seri, diary)

Paul encountered a similar problem during installation, and had to arrange to use his wife's home computer rather than his own.

After several attempts to get the [CD-ROM] drive to work on my computer I give up and have to resort to using [my wife's] laptop to download the [CD-ROM] *Tell Me More*. (Paul, diary)

This problem raises the issue of spatial *inflexibility* (Stracke 2007), illustrating the tensions that exist between the supposed freedom of CALL learners to determine *when* (i.e. temporal flexibility) but not necessarily *where* to engage with their programs.

5.3.3 Problems with the speech recognition software

Along with glitches and installation difficulties, the speech recognition software posed technical problems for many participants. For example, Shoko found her program often failed to recognize her pronunciation of particular phonemes.

My pronunciation was OK most of the time. The only problem was my 'b' sound. It took a while for me to have my 'b' sound recognized by the system. I had to shout 'BEE' 'BEE' 8-10 times before the system finally recognized my 'b' sound properly. I don't know why. (Shoko, diaries)

Occasionally Shoko got error messages before she was even able to attempt some pronunciations.

And the sound recognition system wasn't very stable. I got 'wrong answer' messages many times even before I spoke anything. It happened so many times and I really got sick of it. Very frustrating and almost irritating! Maybe I should have stopped and done something to fix the problem (e.g. restarting the computer), but I just kept doing. (Shoko, diaries)

To make matters worse, it was not always clear to participants whether they were dealing with a technical problem or not. James often found himself questioning whether there was a problem with the speech recognition software or his own pronunciation.

I think the speech synthesizer frustrates me the most because, uh, I don't know, I'm a bit tone deaf or, or sort of just lazy, uh, listening, and I feel I'm pronouncing the word correctly. If I've said the word to sort of someone else they can understand what I'm saying. But this blasted machine doesn't think

I've pronounced it correctly... [I]t just might be just the speech synthesizer that's sort of causing the problem. (James, interview)

Likewise, Paul, Marc, Rilla, and Cheng all felt there was a discrepancy between their pronunciations and their scores on particular activities employing the speech recognition software.

I used the microphone but found that my pronunciation didn't seem to match the desired curve. I went on to repeat the word on several occasions rarely matching the curve even for basic words which I felt I pronounced well! (Paul, diary)

I tried a speaking task and found it incredibly frustrating as the sound equipment appeared to be messing up the program. *Rosetta Stone* uses soundwave comparison between a recorded native speaker voice and my own voice inputted through a microphone and compares the two, giving a red, yellow, or green score based on how well the soundwaves match. The results were completely inconsistent. Sometimes I would be in the green and sometimes in the red although I felt my pronunciation varied very little. (Marc, diary)

Today's lesson was...about listening carefully and imitating what you hear. It was quite amazing—even when it sounded quite similar to me what I produced was obviously different from the “native speaker”. (Rilla, diary)

Especially, when I compare, um, my pronunciation. That's very funny. Sometimes I think it's very, very close, very, very similar. But they give me a very low score. Like 1 point or 2 point, like that. The max, the full score is 7 points. It's just 1 or 2 or 3. It's strange. I think it's similar, it's quite similar. But this thing, no it's not. This is very funny. (Cheng, interview)

For these participants, the ethos of their CALL programs was undermined by feelings of uncertainty and doubt that the speech recognition software was working properly. Unfortunately, technical ambiguity was not the only type of ambiguity encountered by the participants. I present four other types of ambiguity in the next section.

5.4 Key theme 3: Encountering ambiguity

The self-instructed CALL context appears to be rife with uncertainty and doubt. Without a human teacher to turn to, ambiguity appears to be one of the great challenges of learning in this context. The types of ambiguity encountered by participants in this study included (but were not limited to): content, feedback, evaluation, and procedure.

5.4.1 Content ambiguity

Content ambiguity was a major obstacle for participants working with *Rosetta Stone* in particular. By its very design, omitting all translations and grammatical explanations, this series asks a great deal of tolerance of ambiguity from its learners. Learners are expected to use their intuition and deductive powers to match target language words and phrases with pictures and illustrations. For simple concepts this can be quite easy: a picture of an apple matching with the Spanish word “*una manzana*” results in the learner recognizing this word as meaning “an apple”. However, when the phrases grow longer and more complex, ambiguity ensues. For example, Marc encountered ambiguity in terms of the pictures possibly being “read” in more than one way.

These next 3 tasks introduced verbs such as ‘walk’ ‘swim’ ‘read’ ‘run’ ‘chase’(?) (I think the verb was ‘chase’ but there’s no way to check with *Rosetta Stone* to be sure.) There was also an action connected with a cowboy being thrown from a horse, and I had no idea if the action was: ‘falling’ ‘riding’ ‘rodeo riding’ ‘being thrown’ or ‘dressing like a cowboy’ because, again, *Rosetta Stone* never tells you...[Likewise] the verb ‘*tonde*’ was offered with a picture of a boy jumping, a man jumping, a woman jumping, but also with a bird flying in the air and a plane apparently coming in for a landing—so I initially assumed the verb meant ‘jump’ but also realized that it could mean something like ‘be airborne’.) Being unable to confirm these is frustrating. (Marc, diary)

Marc also encountered ambiguity in terms of various parts of the pictures competing for salience.

So this kid’s holding a stick...So maybe it’s, it’s something about holding a stick. But here the boy’s also standing in the road and this kid is not necessarily in a road. So maybe it’s talking about he’s in the road. (Marc, observation 1)

Heather encountered ambiguity in terms of the subjects of the pictures.

I did have difficulty with some pictures when the gender was unclear: pictures of young girls which could have been a classroom of young boys. (Heather, diary)

Rilla encountered ambiguity in terms of the relationships between the subjects in the pictures.

I think you are supposed to learn sort of prepositions. In, under, next to, something like that. Sometimes it was not really clear if the boy was in the plane or next to the plane. ‘In’ was clear that’s true. But if it was ‘next to’ or ‘under’ was not really clear what was meant for example. (Rilla, interview)

5.4.2 Feedback ambiguity

The ensuing frustration resulting from content ambiguity was exacerbated by the fact that there was very little offered in terms of feedback, as there was no one to direct questions to and no way to check understanding. In *Rosetta Stone*, an answer is deemed either correct or incorrect, with no other feedback provided. As a result, both Mathieu and Li struggled to understand why their answers in German writing activities kept being marked as incorrect.

That was quite, actually it was quite weird because you had to know the accents and know the special characters sometimes and I was doing it wrong so the computer said, ‘It’s wrong’ and I was like, ‘I can’t understand, I can’t understand it’ and at the end I was like, ‘Yeah, I forgot this capital letter’. (Mathieu, interview)

Li: I’m a beginner for German so I don’t know that in German the noun should be capitalized. I don’t know that. And when I write, I thought that was right and but the computer says ‘no that’s wrong’ and I don’t know why. It does not tell me the reason just, I mean it’s quite a simple reason but I didn’t get that so I made the mistake for several times and then I finally got that. Just like, you know frustrating because I was trying to get the right sentence but just because a small mistake, the capitalize, because I think that the computer should or the program should explain this kind of thing to me.

I: How did you figure it out eventually?

Li: Because I was having my Historical English Linguistics and it says that, when it says Old English and Old German are Germanic language and when it says in Old English they capitalize the noun and I think that with the German they should also capitalize the noun. So I just try and the computer says ‘yes, you’re right’. (Li, interview)

Li grew increasingly frustrated that she was expected to learn in this way, when she felt it would have been easy for the program to have provided a short explanatory blurb about the fact that nouns in German are capitalized at the first instance of her making this error.

Because I mean if, if I, if I were the designer of the program I would, you know, at least, you know, tell the learner what, why they make these common mistakes. I won’t give them the trouble to go to the library and search for the grammar point if they, you know, everyone has, everyone has to go to the library if they make these common mistakes what’s the point of this program? (Li, interview)

In *Tell Me More*, grammatical explanations are provided via help files, but the explanations are not linked to the activities and only provide generic help, rather than help that is tailored to the particular activity or target language item the learner is

working on. Cheng found these explanations to be insufficient to answer his questions.

[S]ometimes the information of grammar is not linked to that sentence I'm reading in that moment. For example, I read a sentence about, um, about I can't remember actually. I just remember meaning is, uh, 'do you think French is very hard?' like that. Then I click the grammar point. They give information about, um, about, about words, about words. For example about the, uh, like, like, like male words or female words, like that. It's, it's not really information for that sentence. (Cheng, interview)

The combination of the lack of linked grammatical explanations and the absence of a person to direct questions to proved to be too much for many learners. Mathieu, Cheng, and Heather all raise this point as being a major limitation of their CALL programs.

Software is alright, if you want to do like self-learning, if you're a self-learner, if you're quite independent, but most of the time, languages they, they make you ponder some questions and you need, you have to have somebody to answer them. (Mathieu, interview)

I think sometimes we will always have some question like that and we need to ask somebody. But, yes you could not ask that information, ask that software. (Cheng, interview)

I just couldn't handle the frustration. I just could not handle why I was not understanding. Why they were using, um, a particular, um, what I thought was a singular case for, um, a plural case. Yes, those questions were not being answered. (Heather, interview)

5.4.3 Evaluation ambiguity

Participants working with *Rosetta Stone* also encountered evaluation ambiguity. For example, both Shoko and Marc found they were often achieving 90-100% on their *Rosetta Stone* activities, but were unsure as to what this really signified. During self-evaluations, Shoko questioned whether getting 90% on an activity was an accurate measure of what she had learned.

I think my overall results today were OK but not excellent. There are still a lot of things I don't understand (articles, verb endings, pronouns, etc.). My scores were probably more than 90% in average, but I don't have a feeling that I understood 90% of the lessons. (Shoko, diary)

Marc questioned whether he was learning the target language or simply learning how to complete the activities strategically. In *Rosetta Stone*, there are plenty of opportunities to "cheat" in order to attain a higher score. For example, in listening and

reading activities, each screen contains four pictures, each of which is the correct match to the target language prompt once. As a result, the fourth prompt always matches the last unused picture, meaning that one in four prompts is a giveaway. Marc recognized this opportunity to “cheat” and did not always like it.

I’ve become proficient at deducing the correct answer from four pictures (and there are signs that I haven’t really improved tons at that, because I’ve been working at 90-100% to begin with and am still making careless errors). But am I becoming proficient with Japanese? Is any exposure to a language useful exposure? Or am I just playing time-wasting game with *Rosetta Stone*? I’m not sure how I could find out... (Marc, diary)

When Shoko achieved less than her usual 90-100%, she encountered more ambiguity in terms of what this lower score represented.

I’m wondering if I’m doing well so far. Well, I haven’t got any serious problems in my learning. One thing I’m not completely comfortable with about self-instruction is that it’s very difficult to know how well I’m doing. I get a score at the end of each lesson, but I don’t know how to interpret it. For example, is 80% good or bad? (Shoko, diary)

Participants working with *Tell Me More* encountered a different type of evaluation ambiguity. In this program, a dialogue box indicates what percentage of a given activity the learner has completed. However, both Paul and Cheng felt there was a discrepancy between their efforts and their scores on particular activities, and experienced a great deal of frustration as a result.

I don’t yet understand is why the dialogue box is only showing 25% complete. I can’t see anything else that I have to complete on it. I wonder if it is just me I like to know these things and wonder if it is affecting my learning by getting frustrated by not knowing. (Paul, diary)

I followed the program to pronounce every letter one by one. I used about 20 or 30 minutes to skim over the first section. There is a completion rate for each section. It was zero when I finished section one. I have no idea about how the completion rate could be increased. (Cheng, diary)

5.4.4 Procedure ambiguity

Another type of ambiguity encountered by the participants was procedure ambiguity, that is, how to use certain technical features and how to proceed through the CALL programs. For example, Heather, a self-described computer novice, struggled with how to use the onscreen keyboard provided for the *Rosetta Stone* writing activities.

[C]ouldn't seem to sort out the keyboard as I got frustrated with not having or not being able to find a backspace and delete button. (Heather, diary)

During her observation, Heather attempted a writing activity and demonstrated how frustrating this technical feature was to negotiate without clear instructions.

[T]his is where it's so frustrating. Okay, okay. That's a spacebar, isn't it? Now where's the umlaut? Oh, I'll just stick it in there. Oh, that's wrong. Where's the spacebar, sorry, oh never mind. Oh, mistake. Now how do I backspace here? Damn it. Oh...This is where I go off. Where's the backspace? It isn't clear at all. This is why I got so frustrated with the keyboard because I, you know, when I missed out the 'e'. And these things, what does that mean? Um, and how do I go back a space? That's not it. See that? Now how do I?...This is what, this is what I'm finding really frustrating...It doesn't really give you instructions. (Heather, observation)

Heather found that this ambiguity caused her to resort to random clicking through the activities, getting low scores due to a lack of clear activity instructions, rather than not knowing the correct answers.

But sometimes I couldn't understand why I was clicking on something and it wasn't bringing something up on the screen. I was going all over the place and that's when I tended to get 65's and 55's, cause I didn't know what the heck was going on. (Heather, interview)

Working with *Tell Me More*, Seri also found she resorted to clicking randomly through the program in an attempt to figure out how to proceed through an activity without clear instructions.

But like you said, some of the features are not user-friendly. For example the exercises. I don't know where to go after the sheet, whether do I click on the forward button or do I, what, what should I do? But I just click anywhere. (Seri, interview)

For participants who already found it difficult to make time for self-instruction, wasting time on ambiguous technical features and random clicking was a veritable nuisance. Rilla felt that *Rosetta Stone's* refusal to provide clear activity instructions considerably cut into her session, and was an avoidable obstacle to learning.

I really did not know what I was doing. And this is where the explanation could get in. Had they give explanations why you should do what and how it really works. And that you don't have to find out everything for yourself. Because you waste so much time that you could spend on learning...that you have to spend to find out what's going on there. (Rilla, interview)

As well as seeing this ambiguity as a waste of time, Rilla felt that it also rendered sessions less enjoyable.

[I]t was sometimes a bit frustrating when you did not get clear instructions, what you are supposed to do now. So if you have the instructions for example in this so-called dictation bit, where you had to bring the words into the right order. If you had been instructed directly what you were supposed to do, ah, it would have been more enjoyable at the, from the very beginning. (Rilla, interview)

These four types of ambiguity (content, feedback, evaluation, and procedure), along with the technical ambiguity discussed in the previous section, were the cause of a great deal of frustration among the participants, and often resulted in them resorting to additional sources of help and working outside their CALL programs. I present this key theme in the next section.

5.5 Key theme 4: Working outside the program

Reflecting the finding from Stracke's (2007) study, the participants all felt the need to work outside their CALL programs using additional materials. These materials were either supplementary (i.e. covering information not found in the program) or complementary (i.e. covering information found in the program), and served to both enhance learning and accommodate preferences in ways that the programs were not facilitating. The most common types of additional materials were: websites, personal notes, textbooks, and paper dictionaries.

5.5.1 Websites

When Seri felt confused about Spanish sentence structure after one learning session, she sought out supplementary information from a Spanish as a second language website.

I took the liberty to searched more about Spanish online (particularly the sentence structure). (Seri, diary)

She later described how she copied this into her diary, thus allowing for quicker and more convenient access to the information than a program-embedded help file would allow.

If you have the diary you can just write whatever you feel at that time and after that maybe you, like, for the sentence structure of Spanish. I purposefully pasted [the online explanation] into my diary so that whenever I feel confused about the, the structure I can just look right at it. (Seri, interview)

5.5.2 Personal notes

Marc felt the need to enhance his learning by making complementary personal notes for future reference. He anticipated that having such notes would be essential when working away from the computer.

I'm starting to think it would be a good idea to have a pen and some paper with me to take notes as I'm going along. Sure, it's easy to remember this stuff at this stage, when I still haven't had too much input. But what about in 30 lessons from now? Will I still be able to remember everything? What about away from the program? What vocab and phrases will I remember? I think that I remember things better if I write them down. (Marc, diary)

Likewise, Paul explained the need for making complementary personal notes in the form of word lists, as he found the program's lists were not organised according to his preferences. In *Tell Me More*, target language items are first presented in alphabetical order, whereas his preference is for words to be grouped into semantic categories (e.g. parts of the body)⁷. Moreover, nouns are marked as either masculine or feminine, rather than appearing with an article to indicate grammatical gender, and verb paradigms are listed without their pronouns, conventions that Paul found confusing rather than helpful.

I have come across the vocab list at the end of [presentation] 2, still its not great for learning [it's in] alphabetical order like a dictionary. Also just appear to be random words, rather than say 'sust masc' I would prefer to see the 'la' or 'el' bits. And just to carry on this line in the verb conjugations to see the pronouns as well just to help learn them. (Paul, diary)

What I think I'm going to have to do, and what I haven't done yet, is have an exercise book to create my own work. I'm purely doing the work on the computer at the minute. But I think, I don't know what I'm meant to do, but what I will start introducing, probably in the new year, or after Christmas, is my own sort of vocab lists. (Paul, interview)

Also employing complementary personal notes in the form of word lists, Cheng developed his own self-instruction protocol. He used the program to select target language items, copied these items onto cards, and memorized these cards in between learning sessions to complement his CALL program and enhance his learning.

[S]ometimes I use software for some new words, for some new words. And I just, uh, start that software then maybe I check some new words from that software because that software could pronounce that word first for me. Then I write down the word. The writing will be on a piece of paper like that. Then,

⁷ *Tell Me More* does include a feature wherein vocabulary is presented in semantic groupings; however, Paul was unable to access this via the Reference Tools menu, an issue discussed in Chapter 6.

um, when I have time I just memorize them. For example, when I, um, when after my dinner, I have a break time like that, then I take out of that piece of paper, I just memorize that word for about 5 minutes or 10 minutes like that. (Cheng, interview)

5.5.3 Textbooks

Ahn cited the need for supplementary information. She mentioned turning to textbooks for help with pronunciation and when attempting activities of a more advanced level.

Ahn: I think it needs more support in, yeah, say, sort of, like, an additional text or textbook or some, sort of, like, say, for pronunciation, if it gives me more hint about, like, you know, how to pronounce the correct sounds, it would be better.

I: Okay, and how are you overcoming that at this point, then?

Ahn: If I have time I will consult my textbooks with I happen, happen to get, have, and, yeah, and generally maybe I will repeat the question and, like, try again. (Ahn, interview)

I found I could answer Level 1 questions quite easily, but when level 2 started to bring in new stuff, I found myself clueless...Maybe I should used my other textbooks along with the software. (Ahn, diary)

When confronting a particularly difficult grammatical concept, Heather also turned to her textbooks for supplementary information.

I need to learn text and I need to learn how words are spelt and how words are used. I, with German, as I think I mentioned, one of the main, main necessities is learning the definite article. And when you get into the language there are 16 different ways that you can use just 'the' for one word. And I found that I wasn't getting that and that was, uh, I was then going to the textbooks to find out, as back-up, 'Well, why are they using 'des' and why is 'das' in that position?' So I'd go to the textbooks and all I had to do was read it twice and that was it, I understood, clicked. Um, so for me and it may just be for me or people like me, the textbook is definitely a greater, a greater, um, yes, I retain more through textbooks rather than visual. (Heather, interview)

As well as being able to retain more from textbooks, Heather found them to be a much more efficient way of looking up information, perhaps due to her inexperience with computers.

Yes, but then I thought 'why am I doing this when I can pick up a textbook and sort of get all of this information in a tenth of the time?' (Heather, interview)

5.5.4 Paper dictionaries

Although *Tell Me More* comes with an online glossary, James found using a complementary paper dictionary more suited to his preferences, as he felt it was a more “touchy-feeling” way of looking up target language items.

I said ‘well look, there’s nothing that says I can’t sort of look things up’. So I started using a dictionary. Uh, and recently I’ve gone out and bought a phrasebook to sort of keep things going. Uh, and I felt that I was sort of learning new words or sort of different ways of using words in a sentence because of that. Because of, not because of the program, but the fact that I was actually sort of looking them up and reading the definitions. And remember I said touchy-feeling and I think that was where I was getting more touchy-feeling than sort of the actual program itself. (James, diary)

Heather described the advantage of a supplementary paper dictionary as being spatial flexibility, explaining that she could carry it with her and refer to it whenever she wanted, for whatever target language items she wanted, rather than being tied down to the computer and the program syllabus.

I have a dictionary that I keep with me always and I try to build up a store of German vocabulary. And I’m picking up my dictionary and I’m thinking and I’m sitting in the car and I’m thinking ‘oh I don’t know the German name for drainpipe’. And I look it up and I read it twice and that stays with me and that’s wonderful. And that’s what I need. But if I, I haven’t seen a drainpipe on the *Rosetta Stone*. (Heather, interview)

This need to work outside the program with additional materials is something Paul mentioned as a way to bridge the distance between the program’s approach to teaching and his preferred way of learning.

Paul: You know, the simple, the temporary, and the permanent state of ‘to be’, they’re the basics of Spanish, aren’t they? And I’m still struggling with those. Partly because I haven’t learned the conjugations properly, and because I haven’t put them to memory.

I: What do you think it would take for you to really learn them?

Paul: To write them down... To actually do something outside of the software, which is something that I haven’t been doing up to now, and it’s something that I need to do... I could have an exercise book, where I know the front page will be the verbs for ‘to be’. (Paul, interview)

Rilla suggested that the programs would be more useful if they were delivered already combined with some additional materials.

[I]f you use the program as a sort of source, resource and not really as the teacher or the material, [or] the only thing that you have, I think it’s quite useful. But I think you need something additionally to that. Maybe some written explanation or some on-line explanation or a person explaining. (Rilla, interview)

In reference to these additional paper-based materials, Paul, Ahn, Rilla, Cheng, and Heather all echo Stracke's (2007:71) learners in describing them as "conventional, traditional, and normal".

The creating vocab lists I think is going back to old methods of learning. (Paul, interview)

I'm more used to traditional method, like books or direct teaching. (Ahn, interview)

If I had to learn the language and the focus would be on the competence I can gain I would rather return to the 'safer' methods I am used to and from which I know that they work with me. But I am quite curious about this approach...At times though it is quite difficult not to get frustrated and not to want a 'proper' explanation in English...For the sake of mastering some language bit I would rather have a more rational approach than a one that only works with imitation. I feel I need more explanations. (Rilla, diary)

If that people is, um, like, if that people like to study language, um, from a very, uh, from a very traditional language book like that maybe that kind of software, that software, would not good for them. (Cheng, interview)

[I]t may just be my age group. An age group that relied on textbooks and relied on pen and paper and relied on spending time thinking, thinking about things and processing thoughts. (Heather, interview)

However, while Stracke (2007:71) reasons that "it should suffice to point out that many students missed these materials simply because they were used to them", the participants in this study seem to differ from Stracke's learners, in that they did not simply make reference to the spatial *inflexibility* of CALL programs, expressing a longing to take the materials to bed with them and so forth; rather they seem to view the lack of additional materials as an inadequacy of the programs to meet their learning needs in terms of understanding grammatical concepts and retaining content. Considering the fact that many commercial self-instructed CALL programs are advertised as "all-you-need" packages, the need for additional materials is arguably a significant and overlooked challenge to learning in this context.

Despite their use of additional materials, participants did not always feel as though they were able to bridge the gap between what was provided and what was missing. This led them to question their programs' ability to help them achieve their language learning goals. I present this final key theme in the next section.

5.6 Key theme 5: Questioning the program’s ability to teach

As the initial mystique of the programs faded, participants began to look more critically at their programs, and began to question their programs’ ability to teach them the target language. Areas of most concern to the participants related to: target language content, transferability of language skills, teaching approach, and self-assessment.

5.6.1 Target language content

As found in the studies by Murday *et al.* (2008) and Bordonaro (2003) (and in contrast with the findings of the study by Murray 1999a, 1999b), many of the participants questioned the verisimilitude of their CALL programs and were unconvinced that the target language content and activities were appropriate for their needs and goals. For example, Paul was surprised to see what he felt were fairly random target language items presented during his first learning session with *Tell Me More Spanish*.

Word searches—what is this all about. Some of the vocab it was introducing was strange; environment, relate, lend, birth. (Paul, diary)

Paul: I don’t know if they’re just trying to make you laugh. But, some of the words you think ‘Well, that, I would never use that in a conversation.’ Or, I don’t know. I’m trying to think of one example, things like...

I: You said ‘environment’, was an example?

Paul: Yeah, at this stage of learning I just think it’s a strange one to be thrown in. Or, things like magician and something about wizardry, in there, there was. But I just thought ‘Well that’s really strange for someone at level one in the first two sort of like major sessions.’ (Paul, interview)

Working with *Rosetta Stone*, both Shoko and Marc questioned the relevance of the target language items presented to them in early lessons. They were dismayed to find the program focusing on seemingly random words and phrases, rather than the introductory items they felt would be most useful to them as beginners.

I had to write (type) a female name, Giulia or something! I don’t understand why I need to know how to spell ‘Giulia’ when I haven’t learned so many more basic things. For example, I haven’t learned how to say ‘thank you’ or ‘Excuse me’ in Italian yet! I think ‘thank you’ is a more important word than ‘Giulia’ and we should learn the former before the latter. (Shoko, diary)

I feel a bit miffed though when the computer presents me with sentences that are overly artificial. For example, in the food assignment, I worked out that two of the sentences I was made to study were ‘balls are not food’ and ‘hats are not food’. In what situation would it ever be likely that someone would say

these things?! ‘Hey! Take those out of your mouth and leave them on the pool table! Balls are not food, you know!’ (Marc, diary)

Shortly after writing this diary entry, Marc had an experience that confirmed his suspicions that the target language content he was learning was not appropriate for his needs.

[W]hile I was on holiday, I came across a rare opportunity to use my Japanese with a native Japanese speaker, and I feel that I failed miserably. My wife, who has not studied Japanese in more than two years fared better than I did. I used a bit of Japanese in conversation, but it was mostly individual words or short phrases I already knew: ‘*utsukushii*’ (beautiful) ‘*gambatte*’ (good luck) and ‘*eigo no kyooshi*’ (English teacher). I was struggling to ask the man questions like ‘How long have you lived here?’ ‘Where is your home town?’ or ‘What do you do?’—the standard getting-to-know-you questions. But *Rosetta Stone* has not given me any of these. It hasn’t even given me ‘hello’ and ‘goodbye’. It’s given me ‘the red circle is bigger than the blue circle’ and ‘the hat is on the horse’s foot’. Yes, that second example was an actual sentence from today’s lesson.

So, I approached today’s language learning session with some amount of bitterness, some feeling that the program is letting me down because it’s not giving me useful language for having conversations. It’s giving me model declarative sentences that, in real life, have very little chance of actually being uttered. How often in life will I ever make the declaration in Japanese: ‘the man is not full’? On the other hand, it would be far more likely that I would use the questions I had wanted to ask the Japanese man. (Marc, diary)

It seems that the target language content presented by the programs did not correspond with the participants’ needs and goals outside of the self-instructed CALL context, likely due to design constraints, such as needing content that could be easily photographed (in *Rosetta Stone*) or easily fit into a crossword puzzle (in *Tell Me More*).

5.6.2 Transferability of language skills

Participants also felt that the skills they were learning within their programs did not transfer to their real life language needs and goals. As Marc, Shoko, and Li noted, with respect to *Rosetta Stone*, it is easy to match a target language item to a picture on a screen where there are only four options and one option is always correct once. It is not so easy to transfer that ability to other language skills, such as writing and grammatical knowledge.

[T]he computer would speak four possible answers and I would have to select the right one. I am pleased to say that I scored 100 on the test...However, I still feel like this is pretty artificial. How much is being able to recognize one

phrase out of four in a highly controlled setting helping me learn a language? Will this help me be able to go out there and listen to people talking, and understand it, and talk to people and be understood? (Marc, diary)

I just wonder if I can learn all the basic grammatical rules by this sort of direct method...I don't understand the meaning of the sentence, but still I can choose the right answer just by guessing. It's good to be able to choose the right answer, but at the same time, I feel very frustrated because I know it's just a lucky guess and I don't know exactly why it's the answer. (Shoko, diary)

[I]f I make mistakes about a picture match it's, I mean, not difficult for me to correct them, you know. Just the 4 pictures and the 4 sentences eventually you will find them. But when you make mistakes in writing and grammar it's just I mean it's just difficult. (Li, interview)

For Marc and Rilla, learning to read and write in the target language posed an additional challenge not encountered by the other participants. Marc, working with Japanese, and Rilla, working with Mandarin, were both struggling to learn literacy skills in languages that do not use Latin-derived writing systems (all other participants were working with languages that use the Latin alphabet, with which they were already familiar). Although Japanese kana and kanji and Chinese Han are writing systems of great complexity, *Rosetta Stone* offers no explicit instruction on how to use them. The only support provided by *Rosetta Stone* is the option of having text transliterated into the Latin alphabet. Nowhere does the program provide explanations on important aspects of these writing systems, such as the fact that Japanese kana are syllabaries, and Chinese Han characters can have many different meanings.

[T]he way the program teaches kanji is useless. It doesn't teach kanji. It leaves it to the learner to begin recognizing characters by sight (although it neither points out that of the tens of thousands of kanji out there, there are many, many similar-looking characters, nor does it present those similar kanji side-by-side)...And the reader is never required to write or type kanji: she or he simply drags and drops ready-made kanji in the correct order in order to "write". If I ever want to learn how to write in Japanese, I will have to move away from *Rosetta Stone*. (Marc, diary)

5.6.3 Teaching approach

The absence of translations, grammatical explanations, corrective feedback, clear activity instructions, and explicit teaching of non-Latin derived writing systems are not haphazard; rather, they all point back to an underlying approach to language teaching. For *Rosetta Stone*, this approach has to do with creating an immersion environment where the learner is only given target language content to learn from.

and nothing in her/his L1, not even grammatical explanations (and since beginners do not yet know enough target language, explanations cannot be given in that way). However, many participants began to look critically at this approach, and question its efficacy in terms of their own language learning needs and preferences. Both Li and Heather referenced their perceived need to establish a firm foundation of knowledge through explicit grammatical explanations prior to practicing language in use in the form of multiple choice activities.

I do not like learning a language without any grammar explanation. I mean, I can not form a guide in my brain without the help of grammar—why do we form the sentence in that way. Sometimes, I even can not figure out why I make this mistake and the program will not explain to me. (Li, diary)

[I]t's this problem about just getting information without reason and I do find that frustrating. I want to know how the language is structured not just to hear and see it as a phenomenon that is happening around me; that may come later but I need it early on to make a secure foundation. (Heather, diary)

Heather goes on to explain that the multiple choice format and the listen and repeat approach were not enough for her to learn and understand complex grammatical points.

Why, for example, the word 'gelb' has three different endings; it is not enough for me to just hear it and repeated it. (Heather, diary)

Furthermore, on a trip to Zurich, Heather discovered that she was unable to remember the target language content presented in her *Rosetta Stone* program; rather, she could only retrieve the pictures and illustrations representing the content from her memory. She attributed this to the program design, which did not allow her to assign her own mental imagery, and the disconnection she felt from the material when her only means of engagement with it was through “pressing buttons”. Reflecting a theme presented in Stracke's (2007:57) study, Heather ultimately “[rejected] the computer as a medium of language learning” for her own needs and preferences.

In Zurich I tried to recall much of the course but could only bring into conscious memory the visuals at the expense of the text...Even now, recall is just producing images: colours, groups of children, women, their activities such as eating or drinking but the German words are very much in the background...I don't feel that I am engaging sufficiently with the material; pressing buttons is not giving me the strength of connection with the material unlike using a textbook where the word is given my own visual input to carry it to my memory rather than being transported with a given image. Crucially recall is greatly enhanced when I use my own mental imagery rather than that given by a screen. (Heather, diary)

For Li, an additional major obstacle was the lack of corrective feedback.

[W]ithout any explanation of grammar and no feedbacks of the mistakes I have made in the learning process, I am going to repeat the same mistakes again and again and I am not able to remember them by heart, because sometime I myself can not figure out what is wrong and why we should say in that way. (Li, diary)

Working with *Tell Me More*, which does not seem to be unified by one distinct approach to language teaching but instead is composed of a variety of games and activities adopting different approaches (communicative approaches and decontextualized lexico-grammatical drills alike), participants encountered similar challenges. Like Li, Seri found the lack of feedback interfered with her Spanish self-instruction.

Seri: Sometimes you want to know what's the, whether do you answer it correctly or wrongly. They did not offer you that kind of answer.

I: There's no feedback?

Seri: No feedback, yes. No feedback and they don't give you the answer.

I: How do you feel about that?

Seri: ...I feel, like, it would be good if I can have some feedback. It would be nice so you know where you are and you know you won't be making the same mistakes. (Seri, interview)

The heavy emphasis on learning target language items through word games in the *Tell Me More* programs proved to be a challenge for James, who identified as being most comfortable with a conversational approach to language learning, a preference that was not being accommodated by his CALL program.

I find I'm not learning the language as well as I would want to learn it...mainly because I think I have been sort of brought up learning conversational French and this isn't conversational. This is sort of going straight into sort of vocabulary and sort of grammar. Those type of things. And I think that's the thing that's hung me up. (James, interview)

5.6.4 Self-assessment

Ultimately, what most seems to have prompted participants to question their programs' ability to teach were disappointing self-assessments. Pausing to reflect on their progress after a few learning sessions, or even several weeks of study, participants were often distraught to realize that they were not understanding and retaining as much target language content as they would have liked. For example, Rilla lacked confidence that she was correctly understanding the target language content encountered during her Mandarin self-instruction.

I still don't feel I have achieved a lot. I still would not dare to say that I could confidently use some of the language material I was confronted with. (Rilla, diary)

Rather than move ahead in her program, Rilla kept returning to the same activities, hoping they would eventually make sense, thus sacrificing a sense of progress for a sense of confidence that never manifested.

Even though it really bugs me that I do not seem to make any progress; I would rather repeat and repeat until I would feel more confident. (Rilla, diary)

Shoko felt there was an imbalance in the skills she was learning in her Italian self-instruction; the so-called receptive skills of listening and reading were improving, but not the so-called productive skills of speaking and writing.

I've been wondering if it's possible for me to learn how to speak/write just by doing this course. I don't have any problem with understanding the meaning of the sentences in reading and listening, but still cannot say or write such simple sentences as 'I have two books' or 'What do you have?' I still don't know how to say 'we' 'our' 'they'. I don't know how the verb 'have' inflects according to the subject. I understand those words and sentences when I hear and read, but I just cannot say or write them. (Shoko, diary)

Marc was distraught to realize one day that his comprehension of the target language content did not extend beyond his *Rosetta Stone* program. Although he had become adept at attaining high scores in the multiple choice activities, he felt that outside this highly supported context he would not be capable of using the target language items.

I had a momentary flash while using *Rosetta Stone* this evening of utter despair and pointlessness in what I was doing. As I was listening to a sentence being spoken, I thought to myself, "I am only able to understand this sentence because I know it matches up to one of four pictures currently on the screen. If I heard this sentence being spoken in the 'real world' without any context to help me decipher it, I would be totally clueless." (Marc, diary)

Moreover, as Marc advanced through his program he realized that the target language items with which he was most comfortable were all items he had learned outside of *Rosetta Stone*.

I can remember the Japanese names for most of these things because I already knew them before I started with *Rosetta Stone*. The new words from *Rosetta Stone*, I don't yet remember. For example, I can't recall offhand the Japanese words for 'bird' or 'long' or 'hair'. This leaves me to wonder if the way *Rosetta Stone* is set-up is sufficient to teach vocabulary. (Marc, diary)

When participants paused to reflect on their learning and self-assess their progress, they were generally disappointed. They simply were not learning what they

had set out to learn—what they had been *guaranteed* to learn by the program developers. Why? In some of the cases in this study, it seems as though the participants abandoned their programs prematurely. Perhaps those participants are to blame for their lack of progress and success; however, it is also possible that the programs failed to hold their interest and sabotaged their efforts by failing to adapt to their needs and goals early on. In at least two cases (i.e. Marc and Shoko), however, the participants undeniably stuck it out and tried their utmost to achieve progress and success—yet, still they were disappointed, and it is understandable that they began to look critically at and question their programs’ ability to teach.

5.7 Conclusion

This chapter presented the findings of research question 2, which asked: What common themes emerged as most relevant to shaping the learners’ experiences? To answer this question, I presented the five key themes that emerged from an analysis of the data. The discussion of “need for increased self-discipline” illustrated how the learners struggled to engage regularly with their CALL programs, calling into question the notion of temporal flexibility, the so-called great advantage of self-instruction. The discussion of “dealing with technical problems” presented the most common types of technical problems encountered by the participants, and introduced the notion of spatial *inflexibility*. The discussion of “encountering ambiguity” depicted the most common types of ambiguity that confronted the participants, and the challenges that arose as a result. The discussion of “working outside the program” portrayed participants’ attempts to account for the inadequacies of their programs by incorporating additional materials into their self-instruction in order to enhance learning and accommodate preferences. The discussion of “questioning the program’s ability to teach” presented the participants’ attempts to look critically at their CALL programs, and to question their programs’ ability to meet their language learning needs and goals. These five key themes represent common experiences shared by the participants in this study. In the next chapter, addressing the final research question, the key themes are situated within a framework of criteria for evaluating CALL materials in order to illustrate their pedagogical implications for CALL theory and program design.

CHAPTER 6: Research question 3**6.1 Introduction**

This chapter presents the findings of research question 3, which asks: What are the pedagogical implications of the learners' experiences for CALL theory and program design? To answer this question, I first revisit the framework of criteria for evaluating CALL materials suggested by Chapelle (2001b). To make this framework as relevant as possible to learner experience as captured by the data, I then explain the rationale for modifying the framework slightly prior to applying it to the programs used in this study. These modifications are informed by the literature and by the experiences of the participants in this study. The changes serve to both enhance the framework's suitability for the study and provide a critique of the framework in general. I next apply this research-informed framework to the data in order to evaluate the programs in light of learner experience and offer suggestions for improvement. The framework, evaluations, and suggestions for improvement serve as a discussion of the pedagogical implications of learner experience for CALL theory and program design.

6.2 Chapelle's (2001b) six criteria

As discussed above, in response to the apparent methodological gap between CALL and SLA theory (Chapelle 1997, 1998, 2001b, 2004; Harrington and Levy 2001; Jamieson *et al.* 2004; Levy 2000), Chapelle (2001b:8) proposes six criteria for evaluating CALL materials based on research in SLA:

- Language learning potential: the degree of opportunity present for beneficial focus on form
- Meaning focus: the extent to which learners' attention is directed toward the meaning of the language
- Authenticity: the degree of correspondence between the learning activity and target language activities of interest to learners out of the classroom
- Learner fit: the amount of opportunity for engagement with language under appropriate conditions given learner characteristics
- Positive impact: the positive effects of the CALL activity on those who participate in it

- Practicality: the adequacy of resources to support the use of the CALL activity

As Chapelle (2001b:9) goes on to argue, “[i]t is one thing to suggest some criteria, but it is another to demonstrate that criteria have been met”. To demonstrate these criteria, Chapelle (2001b:10) suggests asking the following questions:

- Language learning potential: What evidence suggests that the learner has acquired the target forms that were focused on during the CALL task?
- Meaning focus: What evidence indicates that learners use the language during the task for constructing and interpreting meaning?
- Authenticity: What evidence suggests that learners’ performance in the CALL task corresponds to what one would expect [learners] to see outside the CALL task?
- Learner fit: What evidence suggests that the task is appropriate to learners’ individual characteristics (e.g. age, learning style, computer experience)?
- Positive impact: What evidence suggests that learners...had a positive experience with technology through the use of the task?
- Practicality: What evidence suggests that hardware, software, and personnel resources prove to be sufficient to allow the CALL task to succeed?

Chapelle goes on to outline the types of data that are needed to answer these questions and demonstrate the criteria. For the first two criteria, language learning potential and meaning focus, Chapelle suggests examining the learning outcomes and performance of CALL learners relative to other groups of learners. However, as a comparison of CALL and non-CALL learners was never the objective of the present study, and as proficiency gains were never measured and considered only in terms of participant self-assessment, these criteria are clearly outside the scope of this study.

After eliminating the first two criteria for reasons of scope, the framework is left with four criteria for evaluating CALL materials: authenticity, learner fit, positive impact, and practicality. To demonstrate these criteria, Chapelle suggests data collection methods more in line with the present study, including introspective reports, questionnaires, interviews, and qualitative investigation. As such, these four criteria prove to be both relevant and useful to an understanding of learner experience and the key themes presented in Chapter 5. However, slight modifications to each of

these criteria serve to broaden or narrow the criteria as necessary to create the best possible lens through which to examine the data in this study.

6.2.1 *Modifying Chapelle's (2001b) six criteria*

To explain my rationale for the modifications, I turn to a study demonstrating how the criteria can be applied to actual CALL materials. Chapelle, in collaboration with Jamieson and Preiss (Jamieson *et al.* 2005), uses the framework to have developers, a teacher, and students evaluate an online ESL course. In applying the four criteria of interest here, Jamieson *et al.* use a series of questions to suggest operational definitions. These questions include:

- Authenticity: (2005:100)
 - Is the language in [the materials] needed for outside of class?
 - Is [the language in the materials] like that used outside of class?
- Learner fit: (2005:100)
 - Is the material at an appropriate ability level?
 - Are the student characteristics as anticipated?
- Positive impact: (2005:100)
 - Do students like [the materials]?
 - Will students want to use [other related materials after this experience]?
- Practicality: (2005:116)
 - Is the interface easy to use?
 - Are the students able to work without help?
 - Are the computers and the lab of sufficient quality?
 - How much time does it take a student to finish a unit?
 - Do the students have sufficient time in the computer lab?

Crucially, Jamieson *et al.* developed these questions for evaluating materials designed for classroom use. For the purpose of applying the framework to the materials used in this study, each criterion is modified to account for the self-instructed context.

Authenticity: In considering authenticity, Jamieson *et al.* (2005) focus exclusively on the language content and ask whether or not it corresponds to the language the students will need outside the classroom. While this is indeed an important feature of this criterion and not to be underemphasized, what Jamieson *et*

al. fail to ask is whether or not the *activities* in which the language content is presented correspond to activities outside the classroom. Crucially, activities outside the classroom are more likely to involve person-to-person communication than person-to-computer. In the classroom, even in the CALL classroom, there is bound to be some opportunity for interaction among students. For example, in the study by Jamieson *et al.* the students only used the online course for one part of their ESL studies. As such, there were opportunities for person-to-person communication in the target language during non-CALL-based activities. In contrast, learners working in the self-instructed context may perhaps only interact with their CALL programs. Therefore, there needs to be some amount of correspondence between the CALL activities and the learners' real-world needs (Bordonaro 2003; Murray 1999a, 1999b; Murday *et al.* 2008) (see key theme 5). While technology has not yet reached the point where software can perfectly replicate person-to-person communication, there are examples of CALL programs that successfully simulate this type of interaction, and provide activities that go above and beyond word games, multiple choice, and listen and repeat (for two good examples see Lafford *et al.* (2007) for a discussion of *En busca de esmeraldas* and Murray (1999a) for a discussion of *À la rencontre de Philippe*). For this reason, I use the following questions as an operational definition for my present purposes:

- Authenticity:
 - To what extent does the target language content in the CALL program correspond to the learner's real-world needs?
 - To what extent do the activities in the CALL program correspond to the learner's real-world needs?

Learner fit: Jamieson *et al.* (2005) consider learner fit in terms of a more or less predictable set of attributes and characteristics shared by a target group of learners. In the classroom context, characteristics such as age, linguistic environment, and level of proficiency can be predicted and often controlled for. Moreover, materials are selected for these learners by language professionals based on their suitability. For example, in the study by Jamieson *et al.* the students were all over 18 years old, living in the United States, and placed in the ESL class in question according to their TOEFL scores. In contrast, characteristics of learners working in the self-instructed context are not so easily predicted. Learners who purchase and use

programs such as *Tell Me More* and *Rosetta Stone* can be any age, living in any linguistic environment, and working at any level of proficiency. In fact, programs like *Rosetta Stone*, which present only the L2 in question and avoid use of the L1, are designed precisely to capitalize on this. Moreover, self-instructed learners do not have the advantage of consulting with a language professional in order to choose the most suitable program for their characteristics; rather, learners have to determine suitability for themselves (oftentimes based on little more than package advertising, truncated demos, or word of mouth). For this reason, rather than evaluating self-instructed CALL materials in terms of their ability to anticipate target learner characteristics, these materials should be evaluated in terms of their ability to adapt to a range of learner attributes and characteristics, particularly level of difficulty, computer experience, personality (Larsen-Freeman 2001), tolerance of ambiguity (Grace 1998; White 1999), and learning preferences (Antenos-Conforti 1998) (see key themes 3, 4, and 5). For this reason, I use the following questions as an operational definition for my present purposes:

- Learner fit:
 - To what extent can the learner adapt the CALL program to best suit her/his characteristics?

Positive impact: To gauge positive impact in their study, Jamieson *et al.* (2005) ask whether or not the students enjoyed the online ESL course, and whether or not they would be interested in continuing on with the course at the next level of proficiency. In the classroom context where students are expected to show up and participate in classroom activities, and where students are evaluated on their participation, these are definitely relevant and useful questions to ask. However, in the self-instructed context, these questions may perhaps miss the mark by not accounting for the high levels of learner drop-out. There is little use in asking learners who have abandoned their self-instruction after only a few weeks whether or not they would like to continue on with their CALL programs at the next level of proficiency. Instead, determining the reasons behind procrastination (Ushida 2005), demotivation (Falout *et al.* 2009; Sakai and Kikuchi 2009) and learner drop-out (Jones 1996, 1998; Stracke 2007; Umino 1999) is essential to revealing what kind of impact, whether positive or negative, the self-instructed CALL experience had on learners (see key theme 1). For

this reason, I refer to this criterion as simply “impact” and use the following questions as an operational definition for my present purposes:

- Impact:
 - To what extent did the learner persevere with her/his CALL program?
 - In cases where the learner dropped her/his CALL program, what were the reasons for this?

Practicality: The most obvious differences between practicality as understood by Jamieson *et al.* (2005) in the classroom context, and practicality as it pertains to the self-instructed context, are in terms of teachers, computers, and computer labs. Namely, in the classroom context personnel and hardware resources are supplied and managed by the governing institution, whereas in the self-instructed context learners work without the help of a human teacher and are responsible for ensuring that they have sufficient technology to run their CALL software (i.e. a computer with at least the minimum system requirements). As such, in the self-instructed context it is less relevant to ask questions about the quality of computers and whether or not the learner has sufficient time in the lab, and more relevant to ask questions about the user-friendliness of the software (e.g. installation, setup, interface), the necessity and availability of technical support, and the extent to which the CALL program is self-contained (i.e. in terms of containing all the resources necessary to complete the activities, Fox’s (1986) “wherewithal principle”) (Stracke 2007) (see key themes 2, 3, 4). For this reason, I use the following questions as an operational definition for my present purposes:

- Practicality:
 - To what extent is the CALL program user-friendly?
 - To what extent is technical support needed and available?
 - To what extent is the CALL program self-contained?

Along with these four criteria suggested by Chapelle (2001b), I propose one additional criterion, which emerged as being relevant to the self-instructed CALL context as experienced by the participants in this study: construct validity. In a separate study evaluating an online ESL course, Jamieson *et al.* (2004) identify construct validity as being an essential criterion for quality assessment. The authors define construct validity as “the degree to which test scores [are] meaningful and appropriate” (2004:410). Considerations for construct validity include the number of

items in a test, the weight assigned to each of these items, the way in which feedback is provided, the opportunity to learn from mistakes, and whether or not the tests are appropriate given the material taught. In the self-instructed context, where there is no human teacher to explain, validate, or support tests and scored activities, construct validity is essential to giving learners confidence in their CALL programs and providing opportunities to develop skills in self-assessment. For example, if a program is inconsistent or lacking in transparency in its scoring, if it does not provide clear feedback, if feedback does not allow learners to compare their answers with the correct ones and see their mistakes, or if a program tests material it has not taught, learners may lose confidence in the program's ability to accurately assess their progress and may question the reliability of the technology (see key themes 2, 3, and 5). Moreover, without consistent and transparent feedback from the programs, learners may fail to develop the skills they need for self-assessment (Hurd *et al.* 2001, Murphy 2008). For this reason, I use the following questions as an operational definition for my present purposes:

- Construct validity:
 - To what extent does the learner feel that her/his scores are meaningful and appropriate?
 - To what extent does the learner feel that feedback is clear and constructive?

To summarize, Chapelle (2001b) suggests a framework of six criteria for evaluating CALL materials. After careful consideration, I have eliminated two of her criteria and made slight modifications to the remaining four in order to best suit the self-instructed context. These modifications were informed by the literature and by the experiences of the participants in this study. I have proposed one additional criterion (from Jamieson *et al.* 2004), which emerged as being relevant to the self-instructed CALL context as experienced by the participants. Finally, I have reordered the framework slightly for my present purposes. As a result, this research-informed framework is now as follows:

- Learner fit:
 - To what extent can the learner adapt the CALL program to best suit her/his characteristics?
- Authenticity:

- To what extent does the target language content in the CALL program correspond to the learner’s real-world needs?
- To what extent do the activities in the CALL program correspond to the learner’s real-world needs?
- Practicality:
 - To what extent is the CALL program user-friendly?
 - To what extent is technical support needed and available?
 - To what extent is the CALL program self-contained?
- Construct validity:
 - To what extent does the learner feel that her/his scores are meaningful and appropriate?
 - To what extent does the learner feel that feedback is clear and constructive?
- Impact:
 - To what extent did the learner persevere with her/his CALL program?
 - In cases where the learner dropped her/his CALL program, what were the reasons for this?

In the following sections, I apply this research-informed framework to the data in order to evaluate the materials in light of learner experience and offer suggestions for improvement.

6.3 Evaluation: Learner fit

To what extent can the learner adapt the CALL program to best suit her/his characteristics?

Neither *Tell Me More* nor *Rosetta Stone* fared very well in terms of learner fit. Both programs contain some adaptable features; however, based on the data, it seems that the participants in this study did not take full advantage of these features, and generally did not feel as though their programs sufficiently suited their characteristics. To answer my question, I first present the adaptable features contained in the programs, and then discuss the non-adaptable features, paying particular attention to those identified as being problematic by the participants. Where features have already been discussed at length in previous chapters, I mention them only briefly here.

Embarking on a learning session with *Rosetta Stone* or *Tell Me More*, learners are prompted to make a couple of basic choices relating to adaptable features. In *Rosetta Stone*, for example, learners must first select a level of difficulty between 1 and 3 (although no immediate guidance is provided to inform this choice). Next, learners must select which language skills they want to work on: listening and speaking; reading and writing; or listening, speaking, reading and writing. Similarly, in *Tell Me More* learners must first select a level of difficulty between 1 and 10 (and again, no immediate guidance is provided to inform this choice). Then, learners must select a lesson mode. As described earlier, *Tell Me More* offers a choice of three modes through which to navigate the activities: Free-To-Roam Mode, in which the learners select their own learning pathway; Guided Mode, in which the program suggests a learning pathway based on learning objectives and time constraints; and Dynamic Mode, in which the program uses an intelligent design to present activities to the learners based on their achievement in previous activities. In this way, learners have the opportunity to situate the locus of control where they want it: with themselves (i.e. Free-To-Roam Mode) or with the program (i.e. Guided Mode or Dynamic Mode). These multiple modes are made possible by the fact that *Tell Me More* activities do not progressively build on one another; instead, learners can dip in and out of the various activities, relying on the word look-up feature, the L1 to L2 translations, and the comprehensive Reference Tools menu (i.e. Grammar Explanations, Conjugation Tool, and Glossary) for any help they might need. Participants using *Tell Me More* in this study took advantage of this opportunity for increased learner fit.

I tried [free-to-roam] study first but I didn't know to work that style. It's very, it's not, I didn't know, I didn't know where should I start? I just click very up, every button but it's a little bit hard for me. So I need a guide. I need something, somebody or something to have an introduction, an introduction for me first. So then I re-start again from, um, guide mode, guide mode, yeah. (Cheng, interview)

[I chose the] guided one. I looked at all 3 of them, uh, and I felt that the guided one was the best one to, to sort of get into it. Cause the free-to-roam. I think...allowed me too much flexibility and I could just do what I wanted to do. And I thought the third one was just a bit sort of too, too advanced. (James, interview)

In keeping with Murray's (1999a, 1999b) findings, and contrasting with Murday *et al.*'s (2008) study, participants recognized this increased freedom to determine

learning pathway and seemed to welcome it. In contrast, *Rosetta Stone* does not offer much flexibility to determine learning pathway. Although, in theory, the program is delivered in the equivalent of *Tell Me More*'s Free-to-Roam Mode, learners are not so free in practice. Because the content of the activities builds progressively from simple to complex, and because the program does not offer translations or grammatical explanations, learners who do not follow the suggested linear sequence of the activities may quickly find themselves lost and confused.

Other adaptable features offered by *Tell Me More* are located in the Options menu. Learners have the opportunity to set the level of difficulty for speech recognition activities, control the activity timer, turn music and sound effects on and off, set the number of allowable incorrect answers in a given activity, activate L1 translations and L2 subtitles, and select between Expression (no incorrect answers) and Comprehension (only one correct answer) settings for the dialogue activities. Also in this menu, learners working in the Guided Mode have the opportunity to set learning objectives by prioritizing listening, speaking, reading, and writing skills.

Although accessing the Options menu is fairly straightforward (via the Tools and Info menu found on the upper right-hand corner of the screen), several participants in this study were unable to locate it, and reported feeling frustrated by program features that they could have adapted to better meet their characteristics had they managed to access this menu. For example, Paul described his growing dislike of the music and his efforts to turn it off.

The music is now beginning to irritate me, I spend time trying to get rid of it without success. (Paul, diary)

Have I mentioned the music, need to be able to switch it off! (Paul, diary)

In fact, the program did contain the adaptable feature Paul was looking for, yet he was unable to access the Options menu in order to adapt it. Likewise, both Seri and Cheng struggled with the dialogue activities. These activities consist of a question asked aloud by a native speaker and four options for learners to choose between in response. The default setting for dialogue activities is the Expression setting, in which there are no incorrect answers; rather there are four equally correct ones allowing learners to experience a variety of ways to answer a single question. However, learners do have the opportunity to go to the Options menu and select the Comprehension setting, in which case there will be only one correct response. Cheng and Seri did not understand

this setup, and reported feeling confused when the program seemed to accept all of their responses. Being more familiar with multiple choice questions of the Comprehension type, the Expression setting was frustrating for them. As with Paul, had Seri and Cheng managed to access the Options menu and adapt this feature to their preferred setting, they could have avoided this unnecessary frustration.

Like the Options menu in *Tell Me More*, *Rosetta Stone* has a Preferences menu (accessed via a rather opaque icon on the upper right-hand corner of the screen) where learners can customize certain adaptable features⁸. This menu allows learners to set the level of difficulty for speech recognition activities and the level of typing precision for writing activities. It also allows learners to choose between a happy face or a checkmark for correct answers and an unhappy face or an “X” for incorrect ones. Likewise, learners have their choice of happy and unhappy sound effects to accompany these visuals, along with the option of turning the sound off altogether. Of these adaptable features, several of the participants in this study could have made good use of their ability to adjust the level of typing precision. As described earlier, Mathieu, Li, and Heather, all working with *Rosetta Stone* German, struggled to complete writing activities due to missing capital letters and mispunctuation. They reported feeling discouraged when their otherwise correct responses were deemed incorrect by the program. Upon realizing their errors, they argued that the program was wrong to hold them back for non-communicative sentence-level inaccuracies. Yet, had they accessed the Preferences menu and deactivated case- and punctuation-sensitivity, they could have spared themselves this frustration.

Within *Rosetta Stone* activities, learners also have some control over modes of input and writing system. For example, while listening activities provide input aurally, learners can click an icon to see the written prompt for extra help. Similarly, learners can click an icon to repeat a prompt, and another to preview the answers to an activity. Learners working with languages that use non-Latin-derived writing systems, such as the Japanese kana and kanji or Chinese Han, can choose to work in the target language writing-system, or to have the input transliterated into the Latin alphabet. Marc, for example, took advantage of this ability to go back and forth between writing systems in his Japanese self-instruction.

⁸ Adaptable features differ slightly between versions 2 and 3.

[F]or “writing” tasks...you can either assemble sentences: word-by-word in romaji⁹, syllable-by-syllable in hiragana, or character-by-character in kanji. Because, in today’s assignments, the writing task was a test, I took the easiest route in order to get the highest score: I did the test in romaji. However, if I had wanted to gain the most learning benefit from the test/assignment, I would have chosen to “write” in kanji. Now that I have completed the test and scored a score I am happy with, I may force myself to go back and do the test again in kanji. (Marc, diary)

Marc was one of the few participants in this study to really exploit the adaptable features of his program, likely because he was one of the few to read through all of the supporting documentation and fully understand the extent of his program’s features. In fact, only Marc (using *Rosetta Stone*) and James (using *Tell Me More*), arguably the two most computer-savvy participants, really looked at the documentation (a finding echoed in Murphy (2008)). When asked, other participants expressed an aversion to reading the user guides and help menus, preferring to just “get on with it” (Paul, interview).

I haven’t worked out how to turn [the music] off, and I had the radio on over the top of it and it was irritating...I must admit, I haven’t looked, I haven’t gone into the Help looking, because, you know, I’m thinking ‘Well, if I start doing that I won’t get any Spanish done.’ (Paul, interview)

While the adaptable features presented above largely relate to the setup and technical aspects of using the CALL programs (e.g. level of difficulty, sound effects), much less adaptability is provided in terms of the actual materials. As described earlier, participants in this study felt they needed more than their programs were providing and felt the need to work outside their programs using additional materials, both supplementary and complementary (see key theme 4). These additional materials served to reduce ambiguity (see key theme 3), enhance learning, and accommodate characteristics in ways that the programs were not facilitating. For example, Ahn turned to textbooks to bridge the gap she experienced between reviewing what she already knew and learning the new material presented in her *Tell Me More* French program. Paul found that his *Tell Me More* Spanish program was taking for granted a familiarity with technical grammatical terms, such as “articles” and “acronyms”, and sought help from an English grammar textbook. Likewise, he cited the need to create his own vocabulary lists in order to customize these according to his preferences. Many participants echoed this need to incorporate textbooks and paper dictionaries

⁹ *Romaji* is the Japanese word for the Japanese language transliterated into the Latin alphabet.

into their self-instruction, and to create additional materials available in hard copy offline. For participants working with *Rosetta Stone*, the need for additional materials was frequently cited to compensate for the lack of translations and grammatical explanations. The ambiguity resulting from the exclusion of these two resources proved to be an obstacle too big to overcome for many participants, and severely restricted the program's adaptability to learner characteristics (particularly tolerance of ambiguity (White 1999)). For participants working with *Tell Me More*, additional materials were most often used as a place to consolidate learning and gather together the bits of vocabulary and grammar scattered throughout the activities. The tendency for *Tell Me More* to feel more like a "book of puzzles" (Paul, diary) than a comprehensive textbook similarly restricted the program's adaptability to learner characteristics.

Echoing findings from Umino (1999) on the demotivating factors of self-instruction, another problem relating to learner fit is pace. Several of the participants struggled with the program-controlled pace of *Rosetta Stone*. Although the *User's Guide* (*Rosetta Stone* 2007f:6) claims "[w]e made *Rosetta Stone* for you to use naturally, at your own pace", participants in this study found that they were not in the position to determine the pace of the activities; instead, once they had selected their response to a given prompt, the program quickly moved on to the next prompt, rather than allowing them to determine when to move on. These participants felt that their programs were pushing them along too quickly, not allowing them time to digest and understand the target language content.

I do not quite like the automatic move of the steps, I mean, sometimes I may want to stay a bit longer in one section but the pictures just move away. I know that I can click the number on the foot of the page to go back to the previous section but I would rather I am the person who is in control of the steps because I am the person who is using this program. (Li, diary)

[I]t flashed on the screen and I thought I didn't have really control of the pace that it was going at; whereas with a textbook I can say, 'um, yeah, I'm struggle to understand that. I must, must try and get, um, get a grip on this'. So I could just literally sit with the textbook and go over it. I found I couldn't, as with the textbook, go back to page, go back three pages and think 'hold on, what was, what was that connection? I've lost that, I need to go back and revise'. So, um, that was another area that I felt, I felt uneasy with because I didn't have the instant means of revision or satisfying my own problems or questions. I was taken at someone else's pace. (Heather, interview)

6.3.1 Suggestions for improvement: Learner fit

While I commend both *Tell Me More* and *Rosetta Stone* for the adaptable features they do contain, I also see great room for improvement. First, there is the problem concerning the fact that the less computer-savvy participants were unable to exploit the adaptable features because they were unaware of their existence. While the programs can hardly be blamed for the participants' aversion to reading the user guides, this problem does raise the issue of learner fit in terms of computer experience. If learners with little computer experience consistently fail to read the documentation, resulting in their failure to exploit the adaptable features, resulting in feelings of frustration, the programs would be wise to account for this. In contrast with written documentation that appears to be an obstacle to using the program (a concern also noted by Murphy 2008), a tutorial presented within the program itself could attract less computer-savvy learners. Along with documentation (for those who prefer this medium), an interactive tutorial presenting the setup and technical aspects of the programs, and introducing the various menus and adaptable features accessible via those menus could greatly serve to overcome this problem. This could be particularly accessible to learners with less computer experience by appearing automatically as a dialogue box inviting learners to take the tutorial or by being a clear menu choice on the first screen that appears upon start up. Hiding the tutorial in yet another drop-down menu would only perpetuate the problem described here.

Second, there is the problem concerning the need for additional materials. To enhance learner fit in terms of tolerance of ambiguity and learning preferences, both programs could consider incorporating optional ancillary materials in the form of textbooks and workbooks (possibly provided as printable PDF files) for learners to use both online to clarify meaning and offline to consolidate learning¹⁰. Learners who do not wish to make use of such materials should not be compelled to; however, learners who desire the freedom to work away from the computer on occasion (i.e. spatial flexibility (Stracke 2007))¹¹ and those who appreciate CALL technology but feel more comfortable with textbooks could enjoy the best of both worlds. Crucially,

¹⁰ Since the completion of this study, *Rosetta Stone* has begun to provide printable workbooks for their most popular languages (e.g. German, Spanish), and *Tell Me More* has incorporated printable vocabulary lists and grammatical explanations.

¹¹ Since the completion of this study, both *Tell Me More* and *Rosetta Stone* have created audio CDs/mp3s that the learner can play on a portable media device and listen to away from the computer. This is a welcome addition in terms of providing spatial flexibility and improving learner fit.

among the ancillary materials accompanying *Rosetta Stone* should be translations and grammatical explanations to accompany the online activities, as every participant using *Rosetta Stone* in this study was critical of its teaching approach (see key theme 5) and agreed that such resources are indispensable for reasons of ambiguity and learner fit.

Finally, pertaining particularly to *Rosetta Stone*, there is the issue of pace. To increase learner fit, *Rosetta Stone* could offer pace as one of the adaptable features within the Preferences menu. Learners could choose between having the program automatically move on or clicking a button to call up the next prompt. For learners who choose to have the program automatically move on, they could set a timer to control for a slight delay of the prompt, perhaps two, five, or 10 seconds. In this way, learners could have the time they feel they need to digest and understand the content before moving on.

6.4 Evaluation: Authenticity

To what extent does the target language content in the CALL program correspond to the learner's real-world needs? To what extent do the activities in the CALL program correspond to the learner's real-world needs?

Neither *Tell Me More* nor *Rosetta Stone* fared very well in terms of authenticity. As already discussed in previous chapters, many participants in this study identified a lack of correspondence between both the target language content and activities presented in their CALL programs and their real-world needs (see key theme 5). Paul was surprised to encounter vocabulary items such as “environment” and “wizardry” during his first learning session with *Tell Me More* Spanish, and doubted that such items were a priority for beginners. Shoko, working with *Rosetta Stone* Italian, was distraught after one learning session in which she was asked to spell the woman's name “Giulia” because she had not yet learned much more useful expressions, such as “thank you” and “excuse me”. Marc took issue with the artificiality of some of the sentences he was learning in *Rosetta Stone* Japanese, such as “Balls are not food” and “The hat is on the horse's foot”, doubting the usefulness of these sentences in real-world contexts. His doubts were confirmed when he had an opportunity to practice his Japanese with a native Japanese speaker while on holiday, and found he could not formulate the standard introductory questions he wished to ask, such as “Where is your hometown?” and “What do you do?”.

Likewise, the participants working with *Rosetta Stone* questioned how well the multiple choice setup of most of the activities would translate into the skills needed in real-world contexts. Marc, Shoko, and Li all described how relatively easy it was to progress through the multiple choice activities, where each activity presents four answers and each answer is correct once. The result of this setup is ample opportunities for “cheating”; for example, the fourth prompt always matches the last unused picture, meaning that one in four prompts is a giveaway. In this way, participants felt that they were acquiring skills to successfully complete the multiple choice activities at the expense of skills to successfully use the target language in real-world contexts. Described as a “book of puzzles” (Paul, diary), *Tell Me More* fared no better than *Rosetta Stone* in terms of activities. The heavy emphasis on crossword puzzles and word searches perplexed learners such as James, working with *Tell Me More* French, who had been expecting a more conversational approach to language learning.

6.4.1 Suggestions for improvement: Authenticity

To improve authenticity in terms of the target language content, both programs could attempt to anticipate the learner’s real-world needs and prioritize content accordingly. For example, a popular advertisement for *Rosetta Stone* reads: “He was a hardworking farm boy. She was an Italian supermodel. He knew he would have just one chance to impress her.” If *Rosetta Stone* is indeed marketing itself as a suitable program through which this farm boy can learn the Italian he needs in order to impress the supermodel, sentences such as “Balls are not food” should not be prioritized over “thank you” and “excuse me”. Rather than content that can be easily photographed (as in *Rosetta Stone*) or easily slotted into a crossword puzzle (as in *Tell Me More*), levels designed for beginners could present content that is useful in early interactions (e.g. greetings, introductions, terms of politeness). Moreover, *Rosetta Stone* could follow *Tell Me More*’s good example and include thematic modules (e.g. “Sports and fitness”, “At the restaurant”) for learners to pick and choose between in order to best suit their real-world needs. These modules should not be interdependent, building on one another, but stand alone, allowing learners to skip over modules of no interest.

To further improve authenticity, program activities could serve to prepare learners for authentic interaction by allowing them to practice the skills needed in

real-world contexts. The multiple choice design of *Rosetta Stone* and the “book of puzzles” (Paul, diary) design of *Tell Me More* do little to prepare learners for practical exchanges such as buying train tickets, ordering sushi, or making friends with native speakers. For these purposes, activities with a more communicative design could better serve learners (Brown 1994). For example, *Rosetta Stone* activities could be set up in a question and answer format. In version 2 there is an activity where the learner is practicing telling the time. The screen shows pictures of four clocks and the prompts are:

The time is two o'clock.

The time is four o'clock.

The time is six o'clock.

The time is three o'clock.

In this activity, the learner is meant to click on the corresponding clock after each prompt is given. However, rather than simply matching prompt with picture, the activity could be set up more in line with real life. A voice could ask “What time is it?” (or, enter an opportunity for pragmatic and cultural insight where applicable, a less direct request “Do you have the time?” could be presented and explained). At this point, the prompt “It’s two o'clock” could flash onto the screen and the learner could match this prompt to the corresponding picture. This modified activity presents essentially the same target language content, but in a more authentic way, which could better serve learners in real life time-telling situations.

A final note about authenticity: *Rosetta Stone* could also follow *Tell Me More*'s good example in offering authentic materials such as photographs and maps of places where the target language is spoken. Moreover, both programs could go beyond photographs and maps and offer advertisements, menus, and short authentic texts in the target language as well. These could serve to provide learners with opportunities to experience areas of target language culture of interest to them. *Rosetta Stone*'s “cookie cutter model” (Marc, personal communication, May 23, 2008) wherein every target language is taught using the same stock of images deprives learners of any occasion to interact with authentic materials.

6.5 Evaluation: Practicality

To what extent is the CALL program user-friendly? To what extent is technical support needed and available? To what extent is the CALL program self-contained?

Both *Tell Me More* and *Rosetta Stone* fared better in some aspects of practicality than others. The expression “user-friendly” is generally used to describe technology that is easy to use or learn to use. This includes activities such as installing the software, setting up adaptable features, and navigating the interface. In terms of installing the software, both programs proved to be reasonably user-friendly, given that all of the participants were ultimately able to install and run their programs, even though two participants (i.e. Paul and Seri (using *Tell Me More*)) were unsuccessful at installing the program at their preferred workstations (see key theme 2). In contrast, participants were much less successful at setting up adaptable features, as described above in the learner fit discussion. This was largely on account of the fact that participants were unable to access the menus within which these features are located. Accessing menus is part of navigating the interface in general. Some participants experienced a lack of user-friendliness in terms of navigating the interface, often encountering ambiguity in terms of how to use certain technical features and how to proceed through their CALL programs (see key theme 3). For example, Heather struggled to use the onscreen keyboard provided in the *Rosetta Stone* writing activities, and both Seri (using *Tell Me More*) and Rilla (using *Rosetta Stone*) found that they often resorted to random clicking while trying to navigate through the activities, because they were unsure of how to proceed. Nevertheless, despite these issues, when asked, many participants described their programs as easy to use.

But you know what to do because it's, it's quite, it's not difficult to use at all, so this is, this is a good point about software, it's not difficult at all. Which, something which is not complicated will help people learn and say, 'Ah, this one's good! It's not complicated. You can do it easy.' (Mathieu, interview)

Not very hard. Um, it's very, it's not very hard to work with. To, maybe I spent; I think I spent about 10 minutes or 15 minutes to, to know how to use that program. (Cheng, interview)

In this study, technical support was both needed and available, yet it was never really taken advantage of. As already discussed in previous chapters, many participants encountered technical problems while using their CALL programs (see key theme 2). Along with the installation difficulties described above, Marc and Li (using *Rosetta Stone*) both encountered glitches, while Marc, Shoko (using *Rosetta Stone*), Paul, Cheng, and James (using *Tell Me More*) all encountered problems with the speech recognition software. Although James had the expertise to troubleshoot technical problems by going to his program's website and applying the suggested

fixes, most of the participants struggled to deal with these problems on their own, using commands such as “control-alt-delete” to end and restart the program.

Despite the availability of technical support from both programs via toll-free hotlines and online requests, none of the participants contacted technical support for assistance with their problems. This was said to be on account of several reasons: participants were not aware help was available; participants felt their problems were a “one-off” sort of thing and could not be bothered to seek help; participants were wary of calling hotlines and being put on hold, or sending online requests and waiting days for a response; and, in some cases, the nature of the problems was ambiguous and participants did not feel confident enough to seek help (not knowing whether the problem was due to a technical problem or due to their own incompetence (see key themes 2 and 3)) (Marc, personal communication, April 8, 2009). To test out these concerns I contacted the *Rosetta Stone* help hotline and the *Tell Me More* online technical support. With *Rosetta Stone* I was indeed put on hold for about twenty minutes before speaking to an advisor. However, once I arrived at the front of the queue, the advisor took the time necessary to help me find an answer to my technical query (which involved needing to change my computer’s firewall settings in order to allow the speech recognition software to run properly). With *Tell Me More*, I waited about 10 minutes to be invited into a live chat with an advisor, who then gave me instructions on how to adjust my microphone settings in order to improve the accuracy of the speech recognition software. From these two interactions I found the available technical support to be satisfactory.

The expression “self-contained” is used here to describe the extent to which a CALL program contains all the resources necessary to complete the activities (Fox’s (1986) “wherewithal principle”), which is a claim made by both *Tell Me More* and *Rosetta Stone* as “all-you-need” packages. However, as described above in the learner fit discussion, participants in this study felt they needed more resources than their programs were providing and thus sought out additional materials (see key theme 4) to compensate for what was lacking. These materials (e.g. websites, textbooks, paper dictionaries) were often used to resolve the frequent ambiguity they encountered, particularly content and feedback ambiguity (see key theme 3). For example, Marc and Rilla (using *Rosetta Stone*) struggled to decipher the meaning of ambiguous pictures without the benefit of translations to refer to. Mathieu and Li (using *Rosetta Stone*) struggled to identify why their answers to writing tasks were deemed incorrect

without the benefit of corrective feedback to explain that nouns in German are always capitalized. Heather (using *Rosetta Stone*) grew frustrated upon encountering unfamiliar syntactic forms without any grammatical explanations to account for them. Seri and Cheng (using *Tell Me More*) struggled to make sense of grammatical explanations that were not linked to corresponding activities. Again, the lack of translations and grammatical explanations on *Rosetta Stone*'s part, and the lack of linked grammatical explanations on *Tell Me More*'s part cause these programs to come up short in terms of practicality for reasons of not being adequately self-contained.

6.5.1 Suggestions for improvement: Practicality

To improve practicality, the programs could address these issues in several ways. In terms of user-friendliness, the interface could be improved for easier navigation. For example, the *Rosetta Stone* Preferences menu is indicated by a rather opaque icon consisting of a circle with a square in the center. This is not an intuitive representation of the menu in question. Somewhat better is *Tell Me More*'s icon consisting of a lower case, italicized “i”, a symbol that is often used to represent “information”. Clicking on this icon accesses the Tools and Info menu, which contains the Reference Tools menu (i.e. Grammar Explanations, Conjugation Tool, and Glossary) along with the Options menu, which seems more intuitive. In general, icons should be as intuitive as possible to increase ease of navigation. *Rosetta Stone* has a similar problem with its onscreen keyboard. In keeping with its immersion approach, *Rosetta Stone* opts to leave keys blank rather than label them using the L1. In this way, keys representing “delete”, “backspace”, and “enter” are simply blank squares alongside the alphabet keys. Since the layout of keyboards can vary, learners may find it difficult to navigate the onscreen keyboard during writing activities without clearly labelled keys. If *Rosetta Stone* insists on avoiding use of the L1, perhaps an introduction to the writing activities wherein the target language words for these keys is taught could be incorporated, after which the keyboard could be labelled accordingly in the target language.

In terms of technical support, the data from this study suggest that the answer does not lie in increased access to technical support, as participants did not take advantage of either the toll-free hotlines or online requests for help with the technical problems they encountered. Rather, it seems that efforts would be better spent

decreasing the need for technical support in the first place. However, where there is computer technology there will always be technical problems. As developers work to improve this technology, some of the problems encountered in this study should recede into the past. But, as developers incorporate new, more sophisticated technology into these programs, new problems will inevitably arise. It is not clear how this can be avoided.

What can be avoided, or at least minimized, are the many instances of ambiguity in these programs, thus increasing the extent to which the programs are self-contained (as they claim to be). Content ambiguity could be minimized by providing translations in *Rosetta Stone*. Feedback ambiguity could be minimized by providing grammatical explanations in *Rosetta Stone*, by linking grammatical explanations to activities in *Tell Me More*, and by providing clear corrective feedback in both programs. By incorporating these features, learners will not need to look for translations and grammatical explanations outside their programs, and may avoid unnecessary frustration.

A final note about practicality: For learners who crave more interaction than the programs can provide and who want to test their knowledge with other speakers, online target language chat rooms moderated by native speakers could be set up. This could give learners an opportunity to practice what they have learned using the programs as well as move beyond what is possible in person-to-computer interaction. In this technical age, there is no reason why learners should be stranded alone with their computers, interacting exclusively with a static CALL program. Already programs such as *Tell Me More* are incorporating live chats with IT experts to troubleshoot technical problems; offering live chats with linguistic experts is the next logical step. Although the participants did not take advantage of the technical support made available by the programs, many claimed that they would have taken advantage of language learning support in the form of live chats or online requests.

I: [W]hat if there was, um, an online support where you could e-mail questions to, um, Japanese language experts, who could respond to your questions, your confusions. Would you use that?

Marc: Yeah, I'd definitely use that. Um, again it would be nice to have access to, to a teacher or to some sort of method of, um, confirming any, um, deductions that I make about meaning or to, to confirm or to, to help when, when I'm having trouble with something, like 'Why am I not understanding this?' 'What, what do these particular sentences mean?' and having somebody who can explain it. (Marc, interview 2)

Of course, what learners say they are going to do, and what they actually end up doing can be quite different. However, I would argue that providing language learning support as a way to complement the programs, enhance learning, and quell learner frustration is an option worth pursuing.

6.6 Evaluation: Construct validity

To what extent does the learner feel that her/his scores are meaningful and appropriate? To what extent does the learner feel that feedback is clear and constructive?

Neither *Tell Me More* nor *Rosetta Stone* fared very well in terms of construct validity. Issues relating to this criterion centered around technical ambiguity (see key theme 2), feedback ambiguity (see key theme 3), evaluation ambiguity (see key theme 3), and self-assessment (see key theme 5). For example, Paul, Cheng, James (using *Tell Me More*), Marc, and Rilla (using *Rosetta Stone*) all experienced discrepancies with their speech recognition software wherein they felt that their programs were not consistent in scoring their pronunciations. Sometimes they received low scores on words they felt they pronounced well; sometimes they received both high and low scores on words for which they felt their pronunciations varied very little. The result of this technical ambiguity was a loss of confidence in their programs' ability to meaningfully assess their efforts.

Participants likewise experienced a lack of construct validity in terms of feedback ambiguity. The tendency for the programs to test knowledge rather than teach it (thus perceived due to the lack of translations and grammatical explanations on *Rosetta Stone's* part, and due to the lack of connection between grammatical explanations and activities on *Tell Me More's* part), and the tendency for the programs to mark answers as correct or incorrect without providing additional constructive feedback for learners to use in analyzing their mistakes, caused participants such as Mathieu, Li (using *Rosetta Stone*), and Cheng (using *Tell Me More*) to doubt the usefulness of their program's feedback, as well as the appropriateness of assessments.

In terms of evaluation ambiguity, participants working with *Tell Me More* further questioned whether or not their scores were appropriate. Both Paul and Cheng found the dialogue box tracking their activity completion rate to be confusing, as it did not seem to correspond appropriately to their efforts. For example, Paul could not

get his dialogue box to move beyond 25% although he could see nothing left undone, and Cheng worked on an activity for 30 minutes after which the dialogue box still indicated 0% complete. Participants working with *Rosetta Stone* experienced a different problem. Both Marc and Shoko found that they often scored over 90% on activities, but were unsure as to what this score actually signified. They wondered if they were gaining skills in strategically completing the *Rosetta Stone*-style of multiple choice at the expense of gaining skills in the target language. Given the ample opportunities that *Rosetta Stone* offers for “cheating”, the participants doubted that their scores were an appropriate assessment of their learning; meanwhile, their self-assessments tended to confirm these doubts. Upon reflection, Marc and Shoko both felt that despite progressing steadily through activities with high scores, they were not making gains in the target language to match these scores.

The result of these experiences was generally a lack of confidence in the reliability of the technology, and distrust concerning the program’s ability to accurately assess progress. However, there is one noteworthy aspect of *Rosetta Stone* that stands up well under the scrutiny of this criterion. As Marc described:

I’ve recently figured out the scoring system: the first round of four choices gives you four points for a correct answer, the second round gives you three, the third gives you two, and the last gives you one. This makes some sense, because a user with any amount of observational skills will notice that for each set of four pictures, each picture is the right answer exactly once. So with each round it gets easier to choose the right answer. (Marc, diary)

In this respect, the scoring system used by the multiple choice activities in *Rosetta Stone* seems meaningful and appropriate, because the points awarded to a correct answer decrease as the odds increase that the learner will be able to correctly guess using the process of elimination. As a particularly astute participant in this study, Marc approved of this system and found some amount of renewed confidence in *Rosetta Stone* on account of it.

6.6.1 Suggestions for improvement: Construct validity

To improve construct validity, the programs could address these issues in several ways. First, as suggested above in the practicality discussion, the technology must continue to be improved, thus accounting for the discrepancies occurring within the speech recognition software and eliminating this technical ambiguity. Such technical improvements are not straightforward, but the field must continue to strive

towards them. Second, to address the concern expressed by the participants that their programs were testing rather than teaching, both programs could provide linked grammatical explanations alongside the activities, and *Rosetta Stone* could provide some form of glossary. Moreover, rather than marking answers as simply correct or incorrect, both programs could provide detailed constructive feedback, clearly identifying errors and explaining why they are incorrect. This feedback could be provided immediately upon the learner's first attempt at answering the question, or it could be delayed until the second or third attempt (perhaps this could be set up as an adaptable feature). Ultimately, however, corrective feedback could be made available at some point during the activity, so that a learner who really does not understand her/his error can access timely and appropriate feedback within the activity itself.

Finally, to address the concern relating to evaluation ambiguity and self-assessment, *Tell Me More* could be more transparent about exactly what is needed in order to complete an activity 100%, and *Rosetta Stone* could reduce the opportunity for “cheating”, thus giving learners more confidence that their scores are a reflection of their learning rather than a reflection of their strategizing. As Marc observed:

[K]nowing that *Rosetta Stone* makes each of the four images the right answer once before going onto the next set of four images provides some means for, not exactly cheating, but cutting corners...Yes, I'm cheating myself, but the program is letting me do it a bit too easily... (Marc, diary)

To reduce the opportunity for “cheating”, even slight changes to the multiple choice setup could improve the construct validity of *Rosetta Stone*. Instead of each answer being correct once and only once, the program could present a prompt that does not match any of the answers, allowing for a “none of the above” answer. The program could likewise present a prompt twice, or present a variation of an already used prompt that matches the same picture (e.g. “The boy and the girl are eating” followed by “The girl and the boy are eating”). These variations should not be found predictably within every activity, but appear sporadically. In this way, learners could direct more attention to prompts, and less attention to remembering which answers had not yet been used, which could ultimately improve construct validity and enhance learning.

6.7 Evaluation: Impact

To what extent did the learner persevere with her/his CALL program? In cases where the learner dropped her/his CALL program, what were the reasons for this?

Neither *Tell Me More* nor *Rosetta Stone* fared very well in terms of impact. Perseverance levels among participants were not high. At our first meeting, most participants asked what kind of commitment I was hoping for in terms of length of participation. I replied that I was hoping for two to three hours per week for about six to eight weeks, which is about the same commitment as a university-level foreign language module. This, I predicted, would be an adequate length of time for participants to get over any initial novelty effects, get comfortable with their programs, and provide me with ample insight into the experience of self-instructed language learning. I then asked the participants if they were willing and able to make such a commitment, and they all agreed, assuring me that they foresaw no difficulty with this arrangement. However, according to table 6.1, only four of the 11 participants persevered for more than six weeks, and only a few of the participants consistently sat down with their programs more than once a week. Since learning sessions among the participants rarely lasted more than an hour per session, it is evident that both longevity and degree of participation fell short of the original commitment.

| “Name” | Program and language of study | Length of participation | Number of learning sessions | Apparent primary reason for drop-out |
|---------|-------------------------------------|-------------------------|-----------------------------|--------------------------------------|
| Paul* | <i>Tell Me More</i> Spanish (v.9) | 5 weeks, 2 days | 7 | Too busy |
| Ahn* | <i>Tell Me More</i> French (v.9) | 2 weeks, 2 days | 6 | Too busy |
| Seri* | <i>Tell Me More</i> Spanish (v.9) | 1 week, 6 days | 2 | Too busy |
| Marc | <i>Rosetta Stone</i> Japanese (v.2) | 14 weeks, 2 days | 23 | Dissatisfied with program |
| Shoko | <i>Rosetta Stone</i> Italian (v.3) | 11 weeks, 6 days | 15 | Dissatisfied with program |
| Rilla | <i>Rosetta Stone</i> Mandarin (v.2) | 3 weeks, 2 days | 9 | Dissatisfied with program |
| Mathieu | <i>Rosetta Stone</i> German (v.3) | 2 weeks | ? ¹² | Too busy |
| Cheng | <i>Tell Me More</i> | 10 weeks, 2 days | 10 | Noncompliance with |

¹² Because Mathieu failed to submit any diaries, I am not sure how many learning sessions he completed. However, the online tracking feature of *Rosetta Stone* reports that he spent 1 hour and 9 minutes logged on to the program.

| | French (v.9) | | | study requirements |
|---------|--------------------------------------|-----------------|---|---------------------------|
| Li | <i>Rosetta Stone</i> German (v.3) | 5 weeks | 7 | Dissatisfied with program |
| James | <i>Tell Me More</i> French (v.9) | 3 weeks, 4 days | 8 | Too busy |
| Heather | <i>Rosetta Stone</i> German (v.3) | 8 weeks, 1 day | 8 | Dissatisfied with program |

Table 6.1: Participants' "extent of perseverance" with their CALL programs

*Pilot study participant

This lack of perseverance begs the second question pertaining to impact: why? The final column in table 6.1 attempts a general answer to this question. For each participant there was a primary complaint, that is, an apparent primary reason for dropping out of the study. The primary complaints can be divided into two main groups: the participants were either "too busy for self-instruction", or they were "dissatisfied with their CALL programs". In many cases participants had complaints belonging to both of these groups, but in every case except one, participants identified more strongly with one group than the other. The one exception, Cheng, was unclear. Like the other participants, he found his other commitments kept interfering with his French self-instruction, and for this reason there is a nearly four week gap during which no learning sessions took place within his 10 weeks of participation. However, he was also dissatisfied with certain aspects of his program, such as the lack of connection between grammatical explanations and activities. Ultimately, however, what coincided with his abandonment of the study and what I believe to be the primary reason for his drop-out was my insistence that he comply with the study requirements in terms of data collection. He had ceased writing diaries and instead had plans to write up a final report detailing his self-instruction activities retrospectively. After our interview, during which I stressed the importance of writing diaries immediately following every learning session, he ceased his participation in the study.

Five participants dropped out of the study because they were too busy. Of these five, four were working with *Tell Me More*, one was working with *Rosetta Stone*, and none were among those who made it to the six-week mark. This complaint may relate to the need for increased self-discipline (see key theme 1) required by self-instructed CALL. The very nature of this context, allowing (in fact, *obliging*) learners to determine when the learning sessions will take place (Bordonaro 2003), made this a challenging experience for the participants who saw themselves as having tendencies

towards procrastination (Ushida 2005). However, the expression “where there is a will, there is a way” could apply here. In this fast-paced world, we are all busy. To manage the competing demands of our lives, we prioritize. High priorities get our time, and low priorities do not. For these participants, self-instructed CALL went from being high priority to low priority over a short period of time. For this reason, it is perhaps more useful to ask about this change in priorities than it is to dwell on people’s busy lives. This change in priorities may be ultimately connected to the same feelings of frustration that caused the other group of participants to drop out of the study: dissatisfaction with their CALL programs.

Five participants dropped out of the study because they were dissatisfied with their CALL programs. Of these five, all were working with *Rosetta Stone*, and three were among those who made it past the six-week mark. This dissatisfaction had many origins, and coexisted with an enormous amount of frustration. Frustration, however, was not exclusive to those working with *Rosetta Stone*, as it was reported by every participant in this study. According to the data, every participant was frustrated some of the time and some participants were frustrated all of the time. They were frustrated with technical problems (see key theme 2), frustrated with ambiguity (see key theme 3), frustrated with what the programs were not offering in terms of additional materials (see key theme 4), frustrated with the lack of correspondence between both the target language content and activities and their real-world needs (see key theme 5), frustrated with the lack of corrective feedback, translations (in *Rosetta Stone*), grammatical explanations (in *Rosetta Stone*), and links between grammatical explanations and activities (in *Tell Me More*) (see key theme 5). As these frustrations have already been discussed at length in the learner fit, authenticity, practicality, and construct validity discussions, as well as in Chapter 5, I will not belabour them here.

Based on this substantial amount of reported frustration (not to mention reported boredom, confusion, anxiety, and guilt), it is not surprising that seven participants dropped out of the study prior to reaching the six-week mark, and that three who made it past six-weeks ended their participation feeling discouraged. The overall impact of the CALL programs on participants in this study was not positive. Although occasional comments containing “enjoyment”, “fun”, and “excitement” do occur, for the most part they occur early in the data, usually after the first or second learning session, and such comments are much less frequent in the later data.

I felt quite excited and got straight into the swing of things. (Paul, diary, 1st learning session)

I never had so much fun, especially when I managed to associate some of the words with English...I felt it was funny, considering this was my first attempt to do a Spanish exercise. I really enjoyed it. (Seri, diary, 2nd learning session)

The first time I did it I got about 30% correct. But I was having fun, I think that's the most important thing, that I was having fun clicking. (Seri, interview)

The fact that comments relating to enjoyment occur primarily in the early data and rarely in the later data suggests that perhaps the initial novelty of the programs wore off as participants became more accustomed to working in the self-instructed CALL context. Unfortunately, without the novelty effect to keep things interesting and compensate for the challenges of self-instructed CALL, participants soon wearied of their programs. As Marc wrote in his final diary entry:

My main reason for doing Japanese tonight was 'because I hadn't done it in awhile' and not quite because I was looking forward to doing it. (Marc, diary)

6.7.1 Suggestions for improvement: Impact

Echoed throughout the literature on demotivation is the importance of the language learning materials as a major factor contributing to learner drop-out (Falout *et al.* 2009; Sakai and Kikuchi 2009; Umino 1999). Because the frustration experienced by the participants was often on account of various issues relating to learner fit, authenticity, practicality, and construct validity, clearly improving these criteria has the potential to improve impact. Therefore, taking up the suggestions for improvement I have presented above could be the most direct way of increasing the odds that learners ultimately enjoy a more positive experience with their CALL programs.

6.8 Conclusion

This chapter revisited a framework of criteria for evaluating CALL materials developed by Chapelle (2001b). To both enhance suitability and provide a general critique, I modified the framework slightly to exclude two criteria not relevant to this study and added an additional criterion (from Jamieson *et al.* 2004) that served to illuminate some of the data in a way that the other criteria did not. The modifications to the framework were informed by the literature and by the experiences of the

participants in this study. The research-informed framework included the following five criteria: learner fit, authenticity, practicality, construct validity, and impact. I then applied this framework to the data in order to evaluate the materials in light of learner experience and offer suggestions for improvement. Overall, I would argue that neither *Tell Me More* nor *Rosetta Stone* fared very well under the scrutiny of these five criteria; only the practicality criterion was somewhat satisfied. These programs, and others like them, could improve by addressing these criteria and considering the suggestions for improvement. It is worth emphasizing here that many of these suggestions are inexpensive and within technological reach.

The research question addressed in this chapter was: What are the pedagogical implications of the learners' experiences for CALL theory and program design? As a contribution to CALL theory, I offer up the research-informed framework used here to evaluate two programs designed for self-instructed CALL. The modifications and operational definitions suggested here serve to make Chapelle's (2001b) framework more appropriate for the self-instructed CALL context, which has different demands from the classroom CALL context. As a contribution to CALL design, I offer up the suggestions for improvement made here. These suggestions are only a starting point, but they address the criteria in practical, implementable ways, and based as they are on actual learner experience and sound criteria drawn from SLA and CALL theory, they are a worthwhile starting point.

CHAPTER 7: Conclusion

7.1 Summary of the main conclusions

In this thesis, reporting on a study of learner experience with self-instructed CALL, I attempted to answer three research questions:

1. What are the experiences of learners working with commercial CALL programs marketed for self-instruction?
2. What common themes emerge as most relevant to shaping these experiences?
3. What are the pedagogical implications of the learners' experiences for CALL theory and program design?

In response to research question 1, I created case files for the participants, bringing together all of the data collected through the various methods. These case files describe each individual participant's experience from inception to conclusion, highlighting the positive and negative aspects that had the greatest bearing on the final outcomes on a case by case basis. Although each participant's experience was unique, the case files reveal many shared features, perhaps the most salient shared feature being the premature drop-out of the participants from the study. Reasons for this drop-out fell into two general categories: (1) the competing demands of a busy schedule resulting in a lack of time for self-instruction (i.e. "too busy for self-instruction"), and (2) a belief that the program was inadequate for language learning or not well-suited to the participant (i.e. "dissatisfied with their CALL programs"). In most cases it was a combination of these that ultimately caused the participant to drop out of the study. These reasons correspond with findings from the literature on procrastination and demotivation, which frequently cites the materials as a major demotivating factor and contributor to drop-out (Falout *et al.* 2009; Sakai and Kikuchi 2009; Umino 1999; Ushida 2005).

In response to research question 2, I adopted a grounded theory approach to data analysis and identified five key themes as being most relevant across the entire group of 11 participants: (1) need for increased self-discipline, (2) dealing with technical problems (glitches, installation problems, problems with the speech recognition software), (3) encountering ambiguity (content, feedback, evaluation, procedure), (4) working outside the program (websites, personal notes, textbooks, paper dictionaries), and (5) questioning the program's ability to teach (target language

content, transferability of language skills, teaching approach, self-assessment). These key themes as demotivating factors are echoed throughout in the literature on self-instruction and CALL (Bordonaro 2003; Murday *et al.* 2008; Murray 1999a, 1999b; Stracke 2007).

In response to research question 3, I used a research-informed framework of criteria for evaluating CALL materials to discuss the key themes in terms of their impact on learner experience with self-instructed CALL and their pedagogical implications for CALL theory and program design. The framework, modified from Chapelle (2001b; see also Jamieson *et al.* 2004), addresses five criteria: (1) learner fit, (2) authenticity, (3) practicality, (4) construct validity, and (5) impact. Pedagogical implications highlight suggestions for improvement corresponding with each criteria and directions for future research and development. By addressing the suggestions for improvement, the hope is that many of the aforementioned demotivating factors may also be addressed and resolved, thus preventing premature drop-out. This hope is in line with Gorham and Christophel (1992, in Falout *et al.* 2009), who found that the absence of demotivating factors may be more successful in preventing demotivation than the presence of motivating factors.

Overwhelmingly, the data from this study suggest that the programs were inadequate as “all-you-need” packages for L2 learning. This finding begs the questions: Is self-instructed CALL, as it was undertaken in this study, based on flawed notions of how languages are learned? If we learn languages in order to communicate with other people, should we not teach them in this context as well? Both *Tell Me More* and *Rosetta Stone* claim to teach L2s the way people learn their L1s, yet babies clearly do not learn to speak while sitting alone at a computer doing crossword puzzles, nor are they constantly prompted to choose between four options when assigning meaning to target language items. So how can these programs, which are so far removed from a baby’s language learning experience, be based upon notions of L1 learning? The developers of these series not only claim that L2 learning is possible from using the programs, they declare that this process is “fast, easy, and fun” (*Rosetta Stone* 2010: website). However, the data from this study suggest that such is not necessarily the case, and participants ultimately described their experiences as “frustrating”, “confusing”, and “boring”.

Regardless of what these programs do not do well (i.e. replicate L1 learning). I would still argue that they do meet an important demand in SLA. For 21st century

learners who have no time to attend classes and no patience for self-directed textbook study, logging on to a CALL program may be as easy and natural as checking e-mail. Undoubtedly, technology is ever-expanding and improving. As applied linguists, we should be less concerned with whether or not to accept CALL and whether or not CALL is superior to other modes of learning, and more concerned with what CALL *can* contribute to SLA and how to get the most out of it (see Burston 2003). Judging by the many new packages on the market each year, it is clear that the CALL phenomenon is still growing in response to the need for a convenient and accessible means of language learning. It is also clear that consumers will continue to purchase these programs whether applied linguists approve of them or not. Yet, in contrast with the outpouring of new CALL programs, there has been no such outpouring of research on these programs by applied linguists. Despite its dominating presence in airports, popular magazines, and TV advertisements, I was unable to find a single review of *Rosetta Stone* in an academic journal, and reviews of *Tell Me More* were few and far between (but see Lafford 2004). In a recent paper Chapelle (2010:72) argued, “[u]ntil applied linguists are prepared to offer concrete suggestions about feasible research that can be used in materials evaluation, we may need to be circumspect in criticizing publishers.” To that end, the research-informed framework for evaluation and the suggestions for improvement made here are a step in the right direction.

Crucially, what this study has to offer goes beyond a list of suggestions for the developers of *Tell Me More* and *Rosetta Stone*. This study’s primary contributions to knowledge are at least fourfold, and include: (1) identifying and attempting to fill a gap in the research; (2) providing a window into the experience of self-instructed CALL from the perspective of 11 participants working with two commercial CALL programs in six languages; (3) using the literature and the experiences of the participants in this study to modify a set of criteria for materials evaluation, resulting in a research-informed framework for evaluating self-instructed CALL programs; and (4) demonstrating how this research-informed framework can be applied in practice, thereby creating a tool that can be adopted and adapted as needed by other researchers working in related contexts. Because this study necessarily limited its scope to the evaluation of two CALL programs, and because the nature of qualitative research does not lend itself to generalizability to other contexts, perhaps the greatest contribution to knowledge made here is this fourth point, the research-informed framework for evaluating self-instructed CALL programs. Satisfying Hubbards’

(1988) four guiding principles for developing such a framework, and uniquely tailored to the self-instructed CALL context, this research-informed framework can be used as a starting point to inform future evaluations of self-instructed CALL materials. I encourage all those in the research community who are working in related contexts to continue to develop and refine this framework, as it has shown itself to be a useful tool for evaluation. Future applications of this framework may involve the elimination and/or addition of criteria as appropriate, perhaps even reintegrating the criteria of language learning potential and meaning focus (Chapelle 2001b), which were excluded here for reasons of scope.

Along with these primary contributions to knowledge, I would suggest that there are a number of tentative secondary findings. The first is with respect to learner-language suitability and improving the odds of a more positive experience with self-instructed CALL. From examining the participants' experiences with their CALL programs in this study, it appears as though linguistic typological distance and the learner's knowledge of the target language at the outset may play a role in the learner's ability to work with the program. Learners who choose a target language that is very typologically distant from their L1 and L2s (particularly if the target language uses an unfamiliar writing-system) may struggle more than learners who choose a target language that is less typologically distant. For example, Rilla's attempts to learn Mandarin were made more difficult by her unfamiliarity with tonal languages and her inability to parse the Mandarin phrases for word order and parts of speech. Her knowledge of exclusively Indo-European languages (German, French, Italian, and Greek) did nothing to assist her in the *Rosetta Stone* Mandarin immersion environment, particularly when phrases were presented in the Chinese Han writing-system. In contrast, Shoko found she was able to make progress in the *Rosetta Stone* Italian immersion environment thanks to her ability to transfer knowledge from her typologically related L2s (Latin, French, and English). In doing so, she was able to gain a foothold in the target language, which is often apparent in her diaries where she has noted the many borrowings and parallel structures existing between Italian and her L2s.

Furthermore, learners who choose a target language of which they have no previous knowledge may struggle more than learners who choose a target language with which they already have some familiarity. For example, embarking on her self-instructed CALL, Rilla had no previous knowledge of Mandarin to assist her in this

task and struggled to make progress. In contrast, Marc, working with *Rosetta Stone* Japanese, fared much better. At the outset of his self-instructed CALL, Marc had already studied Japanese through language classes and self-instructed textbook-learning, and this familiarity with the language seemed to afford him the foothold he needed to make progress in the *Rosetta Stone* Japanese immersion environment despite its typological distance from his L1 and other L2 (English and French respectively). His familiarity with Japanese word order, parts of speech, some vocabulary, and his knowledge of the Japanese kana and kanji allowed him to advance through the program while maintaining high scores.

It seems that without a teacher present to resolve the many challenges of self-instructed CALL (e.g. ambiguity), a learner may greatly benefit from having either proficiency in a typologically related language or some previous knowledge of the target language to draw on. Tentatively, then, I would suggest that a learner who is considering embarking on self-instructed CALL would do well to consider the following questions: Is the target language typologically related to the learner's L1 or other L2s? Does the learner have previous knowledge of the target language? If the answer to both of these questions is "no", I would predict the likelihood of a positive experience with self-instructed CALL to be very low, and would recommend commencing with classroom learning and moving on to self-instructed CALL only after the learner has gained some familiarity with the target language. However, if the answer to one or both of these questions "yes", I would predict that there is some cause for optimism, and would recommend trying out self-instructed CALL if that suits the learner's preference.

Another tentative secondary finding relates to the notions of temporal and spatial flexibility. Temporal flexibility arose as an issue within the discussion of the need for increased self-discipline (see key theme 1). The participants in this study cited self-discipline as a huge challenge in the self-instructed CALL context, where the learner is not only free to determine when learning will take place, *s/he is obliged* to do so (Bordonaro 2003). It seems that this so-called advantage of self-instruction may actually be experienced as a disadvantage by the learners, which is surprising given how frequently temporal flexibility is favourably cited in the literature (e.g. Dickinson 1987) without any mention of its corresponding shadow side. How this challenge can be overcome in practice is unclear. Advising learners to find a study buddy and schedule learning sessions as though they were attending regular

classroom sessions may only help the already self-disciplined and highly-motivated learners. As for the undisciplined and unmotivated learners, perhaps self-instructed CALL is simply inappropriate.

Spatial flexibility, coined by Stracke (2007), arose as an issue within the discussion of dealing with technical problems (see key theme 2). Several of the participants in this study echoed Stracke's learners in complaining about the spatial *inflexibility* of CALL, where the learner is restricted to working at a computer, perhaps even a particular computer or computer-lab. However, computer technologies continue to advance and recent innovations have gone a long way in making CALL more spatially flexible through the creation of audio and video podcasts, for example, which are available for downloading onto portable media devices. Despite these desirable advances in flexibility, access to this new media is still dependent on having the appropriate technology, a problem not faced by learners who are more partial to book-learning.

Finally, I would suggest that a tentative secondary finding of this study is the urgent need for self-instructed CALL program developers to move beyond person-to-computer interactions as their mainstay and begin to create L2 person-to-person opportunities within the programs (i.e. moving from Levi's (2000) computer-as-tutor model to computer-as-tool). Touching on what Stracke (2007:57) termed "rejection of the computer as a medium of language learning", several participants left this study questioning whether the isolated context of self-instructed CALL was appropriate for language learning, and doubting the transferability of the skills they were learning at the computer to authentic communicative contexts. A move towards increased person-to-person interactions would not be difficult, as many packages already advertise online technical support – providing online language support with native speakers and learner chat rooms is the next logical step. This could go a long way to preventing demotivation and learner drop-out by returning language to the social and communicative realms for which it is intended.

7.2 Limitations of the study

There are several limitations to this study. The number of case-studies was a modest 11, making it difficult to fully saturate potential key themes not described here (Strauss 1987) and draw stronger conclusions about the findings. Moreover, it is difficult to know how representative the case-study participants were of the self-

instructed CALL population. For example, many of the participants in this study were enrolled in postgraduate studies; some were even enrolled in postgraduate studies in applied linguistics. This linguistic expertise surely played a role in shaping their experiences. However, while this expertise may be a limitation in terms of representativeness, having expert participants provide insight into their experiences arguably enriched the data as well (Jones 1994). Moreover, the participants came from many different L1 and language learning backgrounds. With their headquarters in France and the USA respectively, *Tell Me More* and *Rosetta Stone* were originally designed with a Western European and North American audience in mind. It would be interesting to explore the effects of L1 background on learner experience, for example, to contrast the experiences of Chinese L1 learners with the experiences of English L1 learners. There is also the fact that the participants did not select their own materials, nor did they pay for them; rather, the materials were provided to them free of charge. To have done otherwise, I am sure, would have been logistically problematic, but even so this fact remains a limitation. Moreover, some might argue that a limitation of this study is its complete disregard for proficiency gains. For this reason, I suggest below that future studies exploring learner experience incorporate some measure of proficiency gains where possible, as this could be a source of significant insight. Another limitation of this study, and one that limits any study adopting a grounded approach to qualitative content analysis, is that of internal validity. Ultimately, the interpretation of the key themes that emerged from this study is only one possible interpretation of many. For this reason, I make no claims of generalizability, only suggestions for possible improvements based on the experiences of 11 participants working with two commercial CALL programs in six languages over a period of ten months. However, in my attempt to accurately represent learner experience as it was captured in the data, I took great pains to address issues of internal validity and internal reliability through methodical coding, a second-coding exercise, and qualitative content analysis (see Appendix E for examples of the coding process).

My interest in improving self-instructed CALL programs arises foremost from my experience as a self-instructed language learner, but also from my role as an applied linguist and language teacher, and from my belief that, if language professionals do not position themselves between commercial interests and unsuspecting buyers, learners will continue to experience self-instructed CALL as no

more than a frustrating (and expensive) “waste of time” (Marc, personal communication April 8, 2009). Because there is a clear demand for this technology, and because I see multimedia and CALL technology as holding immense promise for SLA, in my view, this would be a missed opportunity and a great shame.

7.3 Directions for future research

With this in mind, future research could be directed towards using the research-informed framework to evaluate other self-instructed CALL materials in order to test its usefulness in other contexts. Likewise, future research that implements some of the suggestions for improvement made here in order to explore what differences those improvements make to learner experience could prove very insightful. Research could also be directed towards a greater understanding of learner experience, through studies that continue to privilege the learner voice (Conole 2008) by allowing learners to speak for themselves in identifying the factors most salient to shaping their experience in the self-instructed CALL context. Research that explores learner experience and takes into account proficiency gains could also be a valuable way of expanding on the findings of this study. Finally, research with a broader scope than was possible in this study, incorporating more learners, more programs, and more languages would go a long way to verifying the generalizability of the findings presented here.

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APPENDIX A: Participant consent form

Erin Bidlake is an Integrated PhD student in the school of Education, Communication and Language Sciences at Newcastle University. For her PhD research project she will undertake a critical investigation of Computer-Assisted Language Learning (CALL) packages designed for self-instructed learners. She will conduct several longitudinal case-studies in which she will follow the progress of self-instructed language learners working with CALL packages in the foreign language of their choice. Although there has been plenty of research done on CALL and multimedia learning in the classroom context, she has found very little research done on self-instructed learners, working without the support of a teacher or an institution. She hopes to contribute to this field through her study.

Erin is currently recruiting volunteers to participate in the study. Participants should be willing to devote 2-3 hours per week for about 6-8 weeks to the study, in exchange for an opportunity to begin (or improve on) a foreign language using up-to-date computer software, along with acquiring important skills for self-instructed language learning. The study will be conducted over the period of October 2007 to July 2008, but exact dates are flexible to meet the needs of the participants.

The study will make use of diary methods and one or two participant interviews. Participants should be willing to keep an electronic learner diary detailing the experience of self-instruction using CALL. This diary will be used as the primary data on which to base the findings and is a crucial part of the study.

By signing below, I _____ understand that:
(participant name)

- My participation is voluntary.
- I may withdraw from the study at any time.
- I have the right to refuse to answer any questions put to me by the researcher or any requests for information.
- My data will be treated with full confidentiality and my identity will not be disclosed to others.
- If this research is published, my identity will not be recognizable.
- At any time during the study I can contact the researcher to ask for more information about the study and can expect an answer in a timely manner.
- At the end of the study I am entitled to a full debriefing, where the researcher will disclose details concerning the aims, the findings, and the conclusions drawn from the study.

Signed:

Name printed:

Date:

APPENDIX B: Diary training FAQs

Why do I have to write a learner diary?

To answer the research questions I have set for myself, I have to gather a large amount of rich data. I will gather this data in several ways: learner diaries, interviews, observations, and online tracking of learner activity. The more data I gather, the more complete my understanding of your experience will be, and the more able I will be to answer my questions. Although I am using many different methods to collect data, the learner diaries are arguably the most important source, since they will most closely track your experience. This data will provide me with some of my most central insights, and will determine the kinds of questions I ask you in our interview(s). Therefore, if you aren't keeping a diary, you aren't really part of the study!

What is a learner diary?

A learner diary is a record of what you have done (and haven't done!) over the period of language study. However, a learner diary is more than just a record; it's also a place to celebrate when things go well, and vent when things don't. It's a place to figure stuff out, ask questions, complain, reinforce stuff you've learned, express your preferences, refine your strategies, make connections, make excuses, track your progress, and whatever else you want to use it for. Most importantly, your learner diary is not separate from your language study; rather, it is an integral part of your study.

How long should it be?

That will vary considerably; however, it would be great if you could aim for at least a page per entry, typed up into a Word document or equivalent.

What logistical information should I include?

Please begin each diary with:
Week #
Day #: Date
Lesson: #
Time: #hours, #minutes

I don't know what to write about.

Try using the optional prompts for diary-writing, listed below.

I barely have time to squeeze in language study, when will I have time to write my diary?

Since writing your diary is part of the language study, don't see it as something that happens after the learning session; rather, budget your time to include diary writing as part of the session. So if you have an hour to spare, work with the program for 45 minutes and write your diary for the last 15 minutes.

Any tips on how to write my diary?

Some people like to take hand-written notes during their language study, and use these when writing the diary to help them remember different issues that came up. That's a great idea, and please feel free to do so, if you'd like. However, these notes don't replace the learner diary entry, which you should type up in the last 10-15 minutes of your learning session in long form (i.e. not point form).

However you decide to go about writing the diary, please do not "skip" writing your diary immediately after each and every session. The weakness of diaries as a way to collect data is that they rely on your memory of events, and memory is not so reliable! The longer you wait after a given session to write your diary, the less rich the data.

I am really busy this week and I don't think I'll have time to do any language study. What should I do?

Don't worry if you miss a session, that's life! It happens. But maybe you can find 15 minutes to write a diary entry on *why* you missed the session. Maybe you did have a bit of free time, but you didn't have access to a computer with an Internet connection at the time. Or maybe you had a bit of free time but were feeling really unmotivated to do your language study, because the last session was really frustrating and turned you off. Whatever the reason, write about that!

Okay, so I've been writing the diary. What now?

Every couple of weeks I will e-mail you to check in and ask that you send me a copy of your diaries (in a single Word document or equivalent), including all the entries up to that date. Don't forget to back up your files now and then! It would be a shame to lose the diary entries, as well as other important files on your computer!

APPENDIX C: Diary examples**Week 2****Day 6: Tuesday, April 05, 2005****Lesson: 4 and Review 1-3****Time: 2 hours**

Okay! So, two hours later...I am ready to talk Japanese. And by that, I mean I ready to talk about learning Japanese, but in English. Har har. Still can't do much more than the intros, talk about myself a bit, that sort of thing, but it's marked improvement over what I was doing with LL. I am feeling very confident right now. Did lots of activities. And you know what, these activities are actually better than the ones in LL because they feel less evaluative, less right and wrong, more open ended opportunities to practice. In the matching, I just sort of do my best and at the end I score myself. Based on the score I can said that I "passed" or "failed" the activity. If I pass, I feel good, if I fail, I feel shitty and discouraged. On the other hand, the TY activities don't feel like that. There are more of them, they are shorter, they are more varied. I could do really well on one, and not so hot on another, but in the end, nothing feels so much like an evaluation of whether or not I deserve to move ahead to the next lesson. It's very uplifting, actually. I feel so supported and encouraged in comparison to the LL.

Another thing I noticed today is that the kinds of things I had to figure out for myself with the LL (like the fact that months are built by number + the word for month, and numbers are built by, for example 22 is 2 + 10 + 2. That sort of thing). Those are the kinds of things a learner who is trying to notice might pick up. But a learner who is less able to notice might have missed that at first. I assume that learner would have noticed it eventually, but after the hard work of learning the names of the month by memory perhaps, without picking up the shortcuts. Hm.

Still really enjoying the program. Today my strategy was to read through the whole first four lessons, practicing everything out loud. Then I went through all four lesson with the audio, and then I went back to lessons 3 and 4 and did the practice and test activities. It worked well. I feel like I'm progressing. I feel motivated to keep going. TY doesn't rely as heavily on the audio as LL. Maybe that's because they make their course book available for purchase sans audio, so it has to be more flexible. But the audio is nice to listen to for the accent and pronunciation, even though the Japanese pronunciation doesn't seem to be too hard for me (although native speakers listening to me might disagree!!!). Anyway, it's all good today. Thank god! I had gotten to a point in LL where I nearly gave up.

Will move on to Lesson 5 tomorrow hopefully, although I don't know when or where since I'll be out all day—another challenge to self-instruction: making the time! I certainly don't want to try to do this in public—I don't find it's as "transportable" as it claims to be.

Week 2**Day 7: Thursday, April 07, 2005****Lesson: 5****Time: 1 hour**

I missed yesterday because I had a really long day at school—9:30 to 9pm! Of course, a big chunk of free time in the afternoon, but it meant I couldn't be home to

do my Japanese. I don't like trying to do it outside of my bedroom. Doesn't go as well.

But this morning I did lesson 5. I even spoke a bit of Japanese yesterday at school with Eriko and Shoko. Cool!

But I developed two little tricks this morning for some new content. These were for:

kono/kore

sono/sore

ano/are

dono/dore

So basically to make up for the fact that all these words are really confusing, I came up with two memory tricks. First, to remember that they go in the sequence: this, that, that over there, which? I use the trick KSAD, which sounds like casa-d to me. So, a bit of Spanish to help out. And then, to remember that the first of the pair always modifies a noun and the second stands alone (like the difference between “this book” and “this [one]”) I use the trick that the “n” in the first word stands for “needs a noun”.

What else? Well, I've noticed that often the audio deviates from the book in that, when they read out the vocabulary lists, they read them out differently than they are presented in the book, although there is always an English translation accompanying the audio, so I can't get lost. But that's interesting. Just the fact that they have the English on the recording is notable, since the LL has NO English, all Japanese, other than the “Lesson #” starting each unit.

And I have so far skipped one exercise in lesson 4, I believe, because it was too hard and I didn't feel like struggling through it. Required a lot of listening comprehension that I don't feel I have yet. Maybe near the end I'll go back and give it a try.

But mostly I'm doing all the activities and finding them really useful. One activity today even used some authentic material—a timetable, presented as authentic anyway. That's cool.

Alright, I'm off. *Ja mata ne*. Which confused me for awhile, until I realized that *Dewa mata* and *Ja mata* are the same things (*dewa* shortens to *ja*).

APPENDIX D: Optional prompts for diary-writing

Feel free to address the following prompts as needed:

Motivation:

How is your motivation? Did you begin today's lesson reluctantly? Why/Why not? Did you begin today's lesson with enthusiasm? Why/Why not?

Confidence:

How are you feeling about yourself as a language learner? How are you feeling about your ability to learn from this program? Did today's lesson make you feel more or less confident? How so?

Strategies:

Did you encounter any difficulties today? How did you resolve them? Did you make use of any specific strategies or troubleshooting techniques? If so, please describe them!

Learning preferences:

Is the program teaching you the way you would like to learn? How so? What would you like to change?

Progress:

What did you learn today? What have you learned so far? Are you satisfied with your progress so far? Why/Why not?

APPENDIX E: Coding examples

The following serves to demonstrate the coding process I used to determine the key themes that emerged from the data. This excerpt is the first diary entry written by Paul, who was using *Tell Me More* Spanish.

Open coding

Within Glaser and Strauss' (1967) constant comparative method the first stage of coding is referred to as "open coding". Open coding consists of examining the data reflectively in order to tease out conceptual categories. This stage is a process of brainstorming and labelling in broad terms the categories that arise within the data. In this way, I first coded this excerpt using conceptual description.

Week 1, day 1
Sunday 28th October 2007
Lesson 1
2 hours

After several attempts to get the CD drive to work on my computer I give up and have to resort to using [Paul's wife]'s laptop to download the CD *Tell Me More*.

Loading the CD (on [Paul's wife]'s laptop) was fine and setting up my account was straight forward. I felt quite excited and got straight into the swing of things. I spent time looking at the options for lesson modes but I was interested to see the rest of the package so may be rushed into it a little.

Presentaciones 1

Dialogue - was straight forward and I worked through it quickly understanding it with my basic Spanish knowledge. I used the microphone but found that my pronunciation didn't seem to match the desired curve. I went on to repeat the word on several occasions rarely matching the curve even for basic words which I felt I pronounced well!

Word searches

What is this all about? Some of the vocab it was introducing was strange: environment, relate, lend, birth. I am asking myself what is the connection between these words; I know I will not remember these new words like this.

I don't like the hidden word puzzle it is far too basic and again I don't see how it will help me learn the words at this stage. Sounds a bit negative I know.

Grammar Practice

I then got onto the grammar practice and realised I wasn't using the software properly; I was just having a go at everything without reading around the subject matter.

- Comment [EB1]:** Technical problem? Spatial inflexibility? Unable to get program working at preferred workstation
- Comment [EB2]:** Ease of installation and set-up (on second computer)
- Comment [EB3]:** Positive feelings for what is to come
- Comment [EB4]:** Comment on learning to use the program, orientation and organization
- Comment [EB5]:** Strategy: using previous knowledge of Spanish quickened pace
- Comment [EB6]:** Technical problem? Ambiguity? Speech recognition evaluation did not match learner's perceived performance/ability
- Comment [EB7]:** Self-assessment
- Comment [EB8]:** Comment on the kinds of language the program is teaching—not conversational, not meaningful, not preparing him for the communicative contexts he has in mind
- Comment [EB9]:** Questioning the presentation of new words; learner is looking for connection between them, trying to accommodate learning preferences
- Comment [EB10]:** Comment on difficulty: word search too basic
- Comment [EB11]:** Questioning the presentation of new words; learner is looking for connection between them, trying to accommodate learning preferences
- Comment [EB12]:** Contrasting how he's using the software and how he is "meant" to use it; what is this based on? Program explanations? Example of ambiguity? Looking for a teacher?

Crossword puzzles

Do I just look the word up in the dictionary? How am I supposed to know the word for blouse?

Sentence Practice

Just typing mistakes made me look bad in this.

The grammar explanations I struggle with and have forgotten some basic stuff but I don't find the software helping me understand it easily.

I got through it but know I will have to go through this one again just to make sure I am using the software correctly and making full use of explanations.

Comment [EB13]: Ambiguity: unsure of how he is supposed to proceed with this activity. Should he already know the words? Did he miss the activity that would have prepared him for this puzzle? Should he be using outside resources?

Comment [EB14]: Error attribution: typing mistakes rather than lack of language proficiency

Comment [EB15]: Self-assessment: he has forgotten some previously acquired knowledge

Comment [EB16]: Questioning the program's ability to teach; the software isn't helping him the way he needs

Comment [EB17]: Contrasting how he's using the software and how he is "meant" to use it; example of ambiguity? Looking for a teacher?

Axial coding

Within Glaser and Strauss' (1967) constant comparative method the second stage of coding is referred to as "axial coding". Axial coding is the process by which categories are refined and developed into thematic hierarchies and the relationships between categories are elaborated. Thematic hierarchies are created by recognizing a category (e.g. "ambiguity") and then distinguishing between instances of that category to form subcategories (e.g. "procedure ambiguity", "technical ambiguity"). Subcategories may be further divided to form sub-subcategories, and so on, until such distinctions are no longer useful. For convenience's sake, the categories and subcategories may be labelled in short form (e.g. "ambi9", "ambi9.1", "ambi9.1a").

In this way, I next coded the excerpt using thematic hierarchies based on the conceptual description that resulted from the open coding stage. The process of creating thematic hierarchies resulted in a 19 page coding schema. Most of these codes were eventually eliminated though the process of selective coding described below. Therefore, I do not include this coding schema here in its entirety; rather, for the purpose of illustration, I include only one section of the schema (see table E.1).

| Branch | Branch 1 | Branch 1.1 |
|---------------------|--------------------------|---|
| Ambiguity “ambi” | 1 content | 1.1 unsure of prompt 1.2 unsure of grammar 1.3 unsure of writing system |
| | 2 feedback | 2.1 no way to check understanding 2.2 no way to check why the right answer is right and the wrong answer is wrong 2.3 no one to ask questions 2.4 no way to assess learning 2.5 grammatical explanations and activities not linked |
| | 3 pictures | 3.1 too many differences between pictures 3.2 too many similarities between pictures 3.3 recycled so many times that meaning is unclear 3.4 poor quality results in meaning being unclear 3.5 picture can be interpreted in more than one way |
| | 4 assignment objective | |
| | 5 how to proceed | 5.1 working inside vs. outside the program 5.2 unsure how to complete an assignment 5.3 unsure how to use program |
| | 6 technical | 6.1 unsure how navigation/buttons affect score 6.2 unsure how to use technical features 6.3 unsure of whether or not program is working properly 6.4 unsure of timer function |
| | 7 evaluation | 7.1 unsure why a particular score was awarded 7.2 unsure what a particular score actually represents 7.3 unsure why progress bar is not changing 7.4 opportunity for cheating diminishing high score |
| | 8 tolerance of ambiguity | 8.1 high 8.2 low |

Table E.1: Excerpt from coding schema prior to delimitation

Week 1, day 1
Sunday 28th October 2007
Lesson 1
2 hours

After several attempts to get the CD drive to work on my computer I give up and have to resort to using [Paul's wife]'s laptop to download the CD Tell Me More.

Comment [EB18]: tech2.1; flex1.1; desi4.1

Loading the CD (on [Paul's wife]'s laptop) was fine and setting up my account was straight forward. I felt quite excited and got straight into the swing of things. I spent time looking at the options for lesson modes but I was interested to see the rest of the package so may be rushed into it a little.

Comment [EB19]: feel2.3b

Comment [EB20]: feel2.2

Comment [EB21]: feel2.4d

Comment [EB22]: desi4.1

Presentaciones 1

Dialogue - was straight forward and I worked through it quickly understanding it with my basic Spanish knowledge. I used the microphone but found that my

Comment [EB23]: sass2.1; stra1.13

pronunciation didn't seem to match the desired curve. I went on to repeat the word on several occasions rarely matching the curve even for basic words which I felt I pronounced well!

Comment [EB24]: tech1; ambi6.3; ambi7.1; desi4.3

Comment [EB25]: feel1.1a

Word searches

What is this all about? Some of the vocab it was introducing was strange: environment, relate, lend, birth. I am asking myself what is the connection between these words; I know I will not remember these new words like this.

Comment [EB26]: feel1.2d; desi4.7

Comment [EB27]: iden3.1a; desi4.6; ambi4

I don't like the hidden word puzzle it is far too basic and again I don't see how it will help me learn the words at this stage. Sounds a bit negative I know.

Comment [EB28]: feel1.2a; feel1.2d

Comment [EB29]: know2.5; iden3.1c; desi4.6

Comment [EB30]: feel1.1a; ambi8.2

Grammar Practice

I then got onto the grammar practice and realised I wasn't using the software properly; I was just having a go at everything without reading around the subject matter.

Comment [EB31]: ambi5.3

Crossword puzzles

Do I just look the word up in the dictionary? How am I supposed to know the word for blouse?

Comment [EB32]: ambi5.1; ambi5.2; stra1.10e

Sentence Practice

Just typing mistakes made me look bad in this

Comment [EB33]: attr4.3

The grammar explanations I struggle with and have forgotten some basic stuff but I don't find the software helping me understand it easily.

Comment [EB34]: sass1.3

Comment [EB35]: desi2.3

I got through it but know I will have to go through this one again just to make sure I am using the software correctly and making full use of explanations.

Comment [EB36]: ambi5.3; stra6.1

Selective coding

Within Glaser and Strauss' (1967) constant comparative method the third stage of coding is referred to as "selective coding". Selective coding involves the elaboration of thematic networks through a delimitation of the data and theme saturation, which is achieved through eliminating the categories that are not well-saturated and further elaborating the most saturated categories. In this way, I coded the excerpt using selective coding as follows:

First, I undertook a qualitative content analysis (essentially counting exactly how many times each code was used across the entire data set), which revealed which codes were used most frequently in the data, and which were used only rarely. There were 484 codes in total. By eliminating the codes used less than ten times (a number chosen after experimenting with several different cut-off points for its ability to reduce the total number codes to something I considered to be manageable) I cut my coding schema down from 19 pages to six pages with a remaining total of 110 codes. The process of cutting codes was done with extreme care. I not only counted how many times each subcategory appeared in the data, but I added up the subcategory totals to see how many times a category appeared overall. In cases where the

subcategories appeared less than 10 times, but the sum across subcategories added up to more than 10, the overall category remained in the schema.

Second, it became apparent that certain subcategories were interrelated closely enough to be collapsed into a single subcategory. For example, the category “ambiguity” contained the subcategories “content” and “pictures”. Since *Rosetta Stone* uses pictures as prompts within activities (and thus as meaning-bearing content), I felt that these two subcategories could easily be collapsed into one, which I referred to as “content”. This further reduced my coding schema from six to two pages, and from 110 codes to 29 (see table E.2).

Finally, a close examination of the resulting schema revealed rich thematic networks in which categories built on one another, resulting in a multi-layered understanding of the data. To ensure that these networks were fully elaborated, I searched the data for examples and counter-examples of the remaining categories and reanalyzed them. Through reanalysis, five key themes emerged: need for increased self-discipline, dealing with technical problems, encountering ambiguity, working outside the program, and questioning the program’s ability to teach. In some instances, a single category became a key theme (e.g. the category “ambiguity” lead to the theme “encountering ambiguity”); however, in other instances, a key theme arose from the interconnection of several categories (e.g. the categories “design” and “self-assessment” lead to the theme “questioning the program’s ability to teach”).

Appendices – Erin Bidlake

| Branch | Branch 1 | Branch 1.1 | Branch 1.1a |
|-------------------------------|---|---|--|
| Strategy “stra” | 1 for dealing with unknown content | 1.10 work outside the program | 1.10a website 1.10b textbook 1.10c personal notes 1.10e paper dictionary |
| Ambiguity “ambi” | 1 content 2 feedback 5 procedure 6 technical 7 evaluation 8 tolerance of ambiguity | | |
| Design “desi” | 2 <i>Rosetta Stone / Auralog</i> teaching approach 3 vs. other approaches 4 activity comment 5 user-(un)friendliness | 2.2 lack of explanation, feedback, translation 2.3 learner questions ability to learn from program 2.4 testing vs. teaching 3.2 i.e. those employing textbooks/printed materials 3.3 conversational approaches 4.6 activities not appropriate for learner needs/goals 4.7 content not appropriate for learner needs/goals | |
| Pace “pace” | 3 speed of prompts | 3.2 program- vs. learner-controlled pace | |
| Self-assessment “sass” | 1 negative | 1.14 no sense of progress, no learning taking place | |
| Feelings “feel” | 1 negative 2 positive | 1.1 frustration 2.4 general enjoyment | 1.1a ambiguity 1.1b user-unfriendliness 1.1e lack of explanation, feedback, translation 1.1h no sense of progress |
| Flexibility “flex” | 1 spatial | 1.1 lack of flexibility to work at preferred workstation | |

| | | | |
|---------------------------------|--|--|--|
| | 2 temporal | 2.1 need for increased self-discipline | |
| Technical problem “tech” | 1 speech recognition software 2 program installation 3 glitch/crash/freeze | | |

Table E.2: Final coding schema

Week 1, day 1
Sunday 28th October 2007
Lesson 1
2 hours

After several attempts to get the CD drive to work on my computer I give up and have to resort to using [Paul’s wife]’s laptop to download the CD Tell Me More.

Comment [EB37]: tech2, flex1.1; desi4

Loading the CD (on [Paul’s wife]’s laptop) was fine and setting up my account was straight forward. I felt quite excited and got straight into the swing of things. I spent time looking at the options for lesson modes but I was interested to see the rest of the package so may be rushed into it a little.

Comment [EB38]: feel2.4

Presentaciones 1

Dialogue - was straight forward and I worked through it quickly understanding it with my basic Spanish knowledge. I used the microphone but found that my pronunciation didn’t seem to match the desired curve. I went on to repeat the word on several occasions rarely matching the curve even for basic words which I felt I pronounced well!

Comment [EB39]: tech1, ambi6; ambi7; desi4

Comment [EB40]: feel1.1a

Word searches

What is this all about? Some of the vocab it was introducing was strange: environment, relate, lend, birth. I am asking myself what is the connection between these words; I know I will not remember these new words like this.

Comment [EB41]: desi4.7

Comment [EB42]: desi2.3; desi4.6; ambi1

I don’t like the hidden word puzzle it is far too basic and again I don’t see how it will help me learn the words at this stage. Sounds a bit negative I know.

Comment [EB43]: desi2.3; desi4.6

Comment [EB44]: feel1.1a; ambi8

Grammar Practice

I then got onto the grammar practice and realised I wasn’t using the software properly; I was just having a go at everything without reading around the subject matter.

Comment [EB45]: ambi5

Crossword puzzles

Do I just look the word up in the dictionary? How am I supposed to know the word for blouse?

Comment [EB46]: ambi5; stra1.10e

Sentence Practice

Just typing mistakes made me look bad in this.

The grammar explanations I struggle with and have forgotten some basic stuff but I don’t find the software helping me understand it easily.

Comment [EB47]: desi2.3

Appendices – Erin Bidlake

I got through it but know I will have to go through this one again just to make sure I am using the software correctly and making full use of explanations.

Comment [EB48]: ambi5