Autonomy, the Online Informal Learning of English (OILE) and Learning Resource Centers (LRCs): The Relationships Between Learner Autonomy, L2 Proficiency, L2 Autonomy and Digital Literacy

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Autonomy and the online informal learning of English (OILE): relationships between learner autonomy, L2 proficiency, L2 autonomy and digital literacy

Abstract

Learners' varied Web 2.0 and informal online learning practices and subsequent language acquisition would appear to have multiple and complex links to autonomy, affecting L2 autonomy, learner autonomy and general autonomy. If we consider language learning through the lens of complex dynamic systems theory (CDST; Larsen-Freeman & Cameron 2007, De Bot, Lowie & Verspoor 2007), autonomy (of various types) and L2 proficiency and digital literacy would all seem to be acting as attractor states (Hiver, 2015), creating movements potentially leading to virtuous or vicious circles in consecutive feedback loops.

Drawing on examples from the online informal learning of English (OILE) such as watching foreign language series, participating in online forums and multi-player online gaming, we attempt to provide a complex dynamic systems analysis of the autonomy and proficiency interactions at play in these types of learning situations.

Introduction

Learners' varied Web 2.0 and informal online learning practices and subsequent language development would appear to have multiple and complex links to the various types of autonomy identified in SLA literature: L2 autonomy, learner autonomy, general autonomy (Germain & Netten 2004; Rivens-Mompean & Eisenbeis 2009), personal autonomy (Benson 2012) and language learner autonomy (Little 2013/15; Benson 2012). How do the aforementioned types of autonomy interact and is the "autonomy paradigm" alone still a relevant theoretical framework for language learning in online and informal Web 2.0 contexts? Geoffrey Sockett & Denyze Toffoli (2012) argued that it was not and David Little (2015) demonstrated how their perception of the autonomy construct was based solely on a historically and technologically outmoded model of self-access language resource centers (LRCs).

Sockett & Toffoli (2012) proposed to consider both language learning (in the form of OILE) and the autonomy construct through the lens of complex dynamic systems theory (Larsen-Freeman & Cameron 2007, De Bot, Lowie & Verspoor 2007, Dörnyei, MacIntyre & Henry, 2014). Due to the limitations of the argument at the time, it would appear relevant to return to the question here in the attempt to analyze and construct a coherent epistemological basis of the interface between these two areas. The notion of digital literacy has also been proposed (Fuchs, Hauck & Müller-Hartmann 2012) as a springboard to autonomy in learning languages online. In this article, we take a closer look at different types of autonomy, L2 proficiency and digital literacy by treating them as attractor states, creating phase shifts, or critical moments of change, potentially leading to virtuous or vicious circles in a complex dynamic learning system. A variety of OILE activities identified in a group of computer-science students attending English sessions at the Physics department language center of the University of Strasbourg, provide examples of the interactions at play in the online informal language learning situations of contemporary European university students.

Review of the literature: CDST, autonomy and proficiency

Our theoretical framework draws on the existing literature in SLA on complex dynamic systems, autonomy, L2 proficiency and digital literacy. It situates OILE as a sub-category of out-of-class language learning (OCLL), enabling the analysis of critical change developed in section 0.

CDST: a framework for usage-based language development

Complex dynamic systems theory, or CDST, is a prime contender for a prominent place as an overarching theoretical framework for understanding the phenomena of L2 learning (Dörnyei, Henry, & MacIntyre, 2014), whether or not it be referred to primarily for its metaphorical power, as Larsen-Freeman & Cameron have argued somewhat extensively (2007, p. 11‑17). Among the aspects of CDST to have been considered most promising for SLA are its focus on dynamism (change), emergence (properties or phenomena arising seemingly spontaneously; Larsen-Freeman 2014) and co-adaptation (change in one system producing change in other, connected systems; Larsen-Freeman & Cameron, 2007, p. 199). In considering the relationships between autonomy, L2 proficiency and digital literacy, it will be important to consider whether or not co-adaptation is in play and if so how it functions. We shall therefore be attentive to the co-adaptation phenomena that may be occurring in the learning situations examined in this study, particularly at the specific moments of change that indicate movement from one state to another, or reorganization of the learners' language development system.

In complex dynamic systems, major transitions occasionally occur. These are called phase shifts and "what the system does after the phase shift is qualitatively different from what it did before" (Larsen-Freeman & Cameron, 2007, p. 59). Important characteristics of phase shifts are their self-organization (they are not created by an external organizing force, but by the dynamic properties of the system itself) and the emergence of new phenomena creating new stabilities of behavior.

These stabilities are created by attractor states, the paths of least resistance that physical systems are drawn toward. They can be defined as "the compelling tendencies and patterns that ... enable us to understand how stability and predictability are the natural outcomes of complexity" (Hiver 2014: 27). Byrne & Callaghan (2014) consider it impossible to map such metaphors from the mathematical systems where CDST originated onto social reality, yet various studies in applied linguistics, cited by both Larsen-Freeman & Cameron (2007) and Dörnyei et al. (2014), have attempted to do so. Phil Hiver indicates that

> *we may need to conceptualise states like [apathy, flow and learned helplessness] as emergent, dynamic and context-dependent rather than as absolute [variables]. Because they are all categorical patterns that L2 learners can settle into (when casing one or more L2 learners as the dynamic system), they can be considered as attractor states.* (2014: 25)

We hypothesize that autonomy and L2 proficiency and digital literacy act as attractor states within the particular learning systems under study. If so, we should be able to witness phase shifts as a result of their co-adaptation. By studying phase shifts, "control parameters [which] are the key to understanding change in complex systems – … can be identified" (Larsen-Freeman & Cameron, 2007, p. 54). This allows us to "know what drives the system and [be] able to intervene" (ibid). Because phase shifts are essential elements to understanding complex systems, our focus in the results and discussion sections of this paper will be the identification and analysis of such shifts.

OCLL and OILE

A major factor of L2 learning in many contexts today is the importance of out-of-classroom language learning (OCLL; Benson & Reinders 2011), comprising a large diversity of practices that appeal to the CDST properties outlined above. Benson (2011) identifies five components of OCLL: location, formality, pedagogy, locus of control and modes of practice. His examples include all types of out-of-school and post-school learning, which may or may not have a link to more formal instruction. The extensive study by Berns, de Bot, & Hasebrink (2007) concerning 1570 school-aged students in Germany, Belgium, the Netherlands and France establishes the pervasiveness of English language media among European teenagers and indicates that several hours per day are spent listening to songs and various spoken sources of English, reading print media, watching television or films (112-113). Robert Moncrief (2011), finds his Finnish students heavily involved in reading, watching television and films, speaking in various situations and writing e-mails or chats in English. Jack Richards (2014) documents use of chat rooms, self-access centers, interviews, language villages, digital games, social media, e-mediated tandem learning, class projects and television series.

In France, Toffoli & Sockett's (2010, 2015) studies have led to investigations into a particular form of OCLL, the Online Informal Learning of English (OILE). OILE has been described as "a range of Internet-based communicative leisure activities through which learners are exposed to media content and interact with others in English" (Kusyk & Sockett 2012). OILE "activities include online viewing of original version television series, social networking in English and listening to English-language music on demand" (Kusyk & Sockett, 2012). The research in this area suggests that OILE is one of the principle ways language learning is happening today, learners of English being engaged in "regular language use independently of any institutional structure" (Sockett & Toffoli, 2012: 149). Several studies looking at OILE in terms of CDST have concentrated on the individual variety of initial conditions, on the specific diversity of learning trajectories, on interactions between temporal and spatial factors or on emergence of language output linked to exemplar-intensive input (for example Kusyk & Sockett 2012; Sockett & Kusyk 2015). In counter-distinction to OCLL, which focuses on deliberate attempts to improve one's English (Benson 2006: 26), "OILE has been described as a process driven by the intention to communicate, with language learning being only a by-product of this communication" (Sockett 2014: 85). Other researchers have referred to such learning as 'incidental', 'unplanned' or 'informal' (Schwartz, 2013).

This is the means by which learners (autonomously) become language users, perhaps more easily than in the past, when it was necessary to travel abroad or undertake lengthy and long-lasting correspondence to create similar conditions and effects. In this sense OILE activities would appear to have a direct relationship to autonomy in language learning, a relationship which Sockett & Toffoli began to explore in 2012, in an article entitled "Beyond learner autonomy: a dynamic systems view of the informal learning of English in virtual online communities". Their conclusion, that

> *the learner autonomy model is no longer pertinent to the learning of English in France today, since language use and implicit learning are already taking place through everyday communicative activities in virtual communities* (2012: 140)

begs to be reconsidered, especially in light of Little's remarks in section 0 above.

Autonomy

The concept of autonomy in language learning has attracted considerable attention, particularly since the 1980s, when Henri Holec and the CRAPEL team in France made it a central focus of their

teaching practice and research. According to Phil Benson (2006), Holec's definition of autonomy is still the most widely cited in SLA literature (21).

Claude Germain & Jean Netten (2004) or Annick Rivens-Mompean & Martine Eisenbeis (2009), identify three types of autonomy as regards language learning: general autonomy, language autonomy and learner autonomy. General autonomy is based on a psychological predisposition to autonomy and can be found in psychological constructs such as attachment theory, where more traditional psychological perspectives might consider them as determined and determining of learning capacity (Rholes & Simpson 2006; Toffoli 2016).

Language autonomy "resides in being able to say what you want to say rather than producing the language of others" Ernesto Macaro (2008: 60) states synthetically. Benson (2012: 37) echoes this, defining "the ultimate importance of foreign language learning [as] not the acquisition of a shared body of knowledge, but the ability to say what one wants to say in more than one language". Rivens-Mompean & Eisenbeis (2009) describe language autonomy as involving the capacity to take spontaneous and authentic initiatives in the foreign language, to which Little (2015) adds that this involves using a large panoply of discursive roles for both initiating and responding to spoken interactions.

Learner autonomy has primarily been identified with skills that learners develop in order to learn effectively "on their own". Brigitte Albero (2003) identifies several skill sets (technical, informational, methodological, social, cognitive, metacognitive and psycho-affective) that can be grouped into the three categories proposed by Candice Stefanou et al (2004): organizational, procedural and cognitive. Organizational autonomy, which is essentially technical, includes things like responsibility for classroom rules or choosing dates and deadlines for work to be submitted. Procedural autonomy, which would include Albero's informational and methodological skills, relates to finding information and choosing one's own resources, preferred media and tools. Cognitive autonomy spans the whole group of cognitive, metacognitive, social and psycho-affective aspects of learning. It concerns how learners analyze various parts of a problem, verify hypotheses, check results and think about the learning process. It includes their self-confidence and tolerance of uncertainty, how they cooperate with others or seek assistance (Toffoli & Speranza, forthcoming).

Language learner autonomy can be considered as a subset of learner autonomy, defined by Henri Holec (1979, cited here as Holec 1981), and referring initially to the context of self-access language resource centers (LRCs). Holec identifies primarily organizational and procedural skills allowing a student to successfully navigate the realities of language learning in a context where direct access to foreign languages and foreign-language users was only possible through the mediation of resources made available in a learning institution.

David Little (2013, 2015) and Leni Dam (2013) consider language learner autonomy to be an operative concept not only in open-access contexts, but also for classroom learning. They thereby include social interaction and the negotiation of meaning as essential components of language learner autonomy. Little (1991, 2015) also integrates cognitive skills, primarily the capacity to reflect on one's own learning process.

Germain & Netten consider the relationship between autonomy and language learning to be inherent to the pedagogical methodology chosen: language taught purely as subject matter (knowledge) cannot induce development of autonomy, whereas language taught as a means to communicate (skill) can (2004: 4). They postulate that in the case of FL acquisition, it is language autonomy that leads to learner autonomy and finally to general autonomy. Little (2013) and Dam

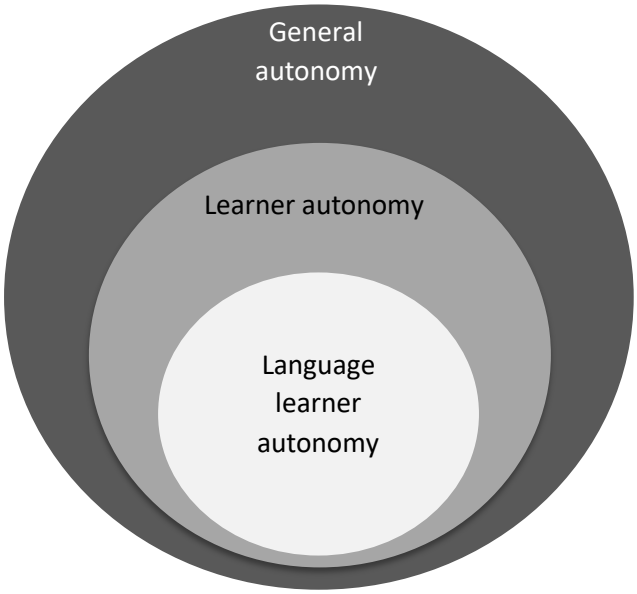
(2013) would appear to suggest the opposite, autonomy in the classroom serving as a trigger to language autonomy.

Benson (2012) does not use the term 'general autonomy', but rather 'personal autonomy', which he links to learner autonomy and thereby to language learner autonomy, arguing that:

> *Personal autonomy entails learner autonomy, because the process of learning to be autonomous must itself involve autonomy. Learner autonomy entails language learner autonomy, because learning is largely a matter of language-mediated socialization and because personal autonomy itself entails self-expression and autonomy in language use.* (37)

As this passage make clear, Benson does not see the overlapping autonomies (language, learner and personal) as involved in a dynamic process, but rather as concentric entities (expressed through the term 'entailment'), as the following diagram illustrates:

Diagram 1: Autonomy as a concentric state



It is our contention that autonomy is not a state but a dynamic process (which, to be fair, Benson does imply, 2012: 26) and that bi-directional movements occur between the different types of autonomy: general autonomy leads to the capacity to learn autonomously and also to language autonomy and the opposites also hold true. It would seem difficult to use language autonomously if we have not learnt it autonomously. This could be schematized as follows:

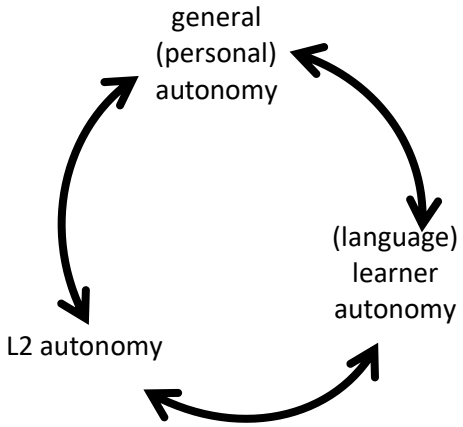


Diagram 2: Autonomy as a dynamic process

In order to further explore this directional dynamic, we propose to examine some students' comments on language learning both in and out of the classroom. We propose to further address these questions in the specific light of OILE research, as one large area of OCLL that can affect the way learners position themselves and their L2 activities on the autonomy scale. We will examine the interactions they perceive between their online informal learning and the activities they engage in in the more formal, yet explicitly "autonomy-oriented" setting of a language resource center in the light of CDST.

LRCs

A Language resource center (LRC) is a learning-space / place which *The Language Resource Center handbook* (Socrates Programme 2003) defines in terms of the services it provides, the resources it possesses, and the missions it targets, centered on language learning / teaching and research. As one of the main vectors of language learning in university settings in Europe, LRCs aim to foster individualized learning, learner autonomy, innovation, e-learning and research into these areas (Wulkow 2009). LRCs have a history of building on and studying autonomy in relation to learning. Rivens-Mompean (2013) cites autonomy first in her discussion of the "founding principles behind LRCs" (129-135) and many of the authors and publications she refers to in her monograph on LRCs (David Little, Nicole Poteaux, Brigitte Albero, Turid Trebbi, several members of the CRAPEL team in Nancy, France) have explicitly examined autonomy in relation to learning in these contexts. Autonomy has been recognized as both a prerequisite for and an objective of learning in an LRC (Rivens-Mompean 2013: 134). This historical position supports our reliance on LRC students as 'informants' concerning autonomy issues. On the other hand, although LRCs are not traditional classrooms, we assimilate them, for the purposes of this article, to language classrooms, harboring the official, if not formal learning of language for many university students.

Proficiency factors

OILE and digital literacy

A probably obvious but often unstated factor influencing the access to and use of online technologies for language learning is the technical skill level that students may or may not possess. Colin Knobel and Michele Lankshear, authors of *New literacies* (2011), affirm that digital literacies

"quite simply, involve the use of digital technologies for encoding and accessing texts by which we generate, communicate and negotiate meanings in socially recognizable ways" (2008: 258). Malgorzata Kurek and Mirjam Hauck (2014) remind us that the European Union considers digital competence to be one of eight key competences for lifelong learning (119) and the volume in which their text appears defines digital literacies "as a way of being an engaged, responsible, reflective citizen in a 21st-century global community permeated by multimodal technologies" (Guikema & Williams 2014: 3).

Fuchs, Hauck & Müller-Hartmann (2012) have linked learner autonomy to digital literacy specifically as concerns the context of language learning and it is our contention here that while technical skill may not be a sufficient quality for language learning to take place in online activities it would certainly seem to be a prerequisite for engagement in such practices.

The question of digital literacy therefore appears crucial to considerations of OILE. Such interaction would also, presumably, affect L2 proficiency, as indicated in diagram 3 below and as will be expanded upon in the following section.

We hypothesize that digital literacy will have significant leverage on the repertoire of OILE activities learners will engage in.

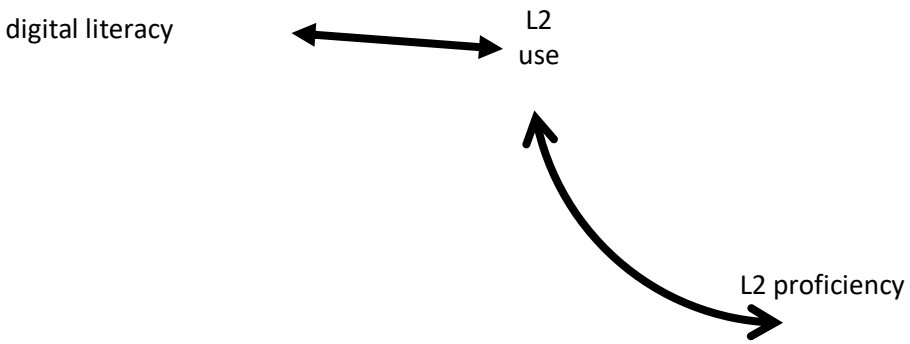


Diagram 3: digital literacy influencing L2 use and (indirectly) L2 proficiency

OILE and L2 Proficiency

If the primary objective of language learning is to communicate with others, it is the degree of proficiency we attain that allows this communication to be more or less effective. Cognitive load theory (CLT), which purports to link instructional design to the capacity of the individual to process certain amounts and types of information, has suggested that different instructional methods and strategies need to be adopted in accordance with the skill level of the learner. Learning requirements differ for novices and for experts and teaching techniques should reflect these differences (van Merriënboer & Sweller 2005; Chanquoy, Tricot & Sweller 2007). Benson identifies two basic levels with two different types of learning for languages:

> *Up to a certain point, learning a foreign language may, indeed, involve acquiring a defined body of knowledge (of the most frequent words and basic phonological and grammatical structures, for example), but beyond this point ... the content of language learning is related to the 'why' of language learning: what the learner wants to do with the language, or more fundamentally, who the learner wants to become as a user of it* (Benson 2012: 37).

Using a corpus analysis approach, Sockett has demonstrated that the most prevalent OILE activity (watching American television series) "correspond[s] well to the CEFRL B1 descriptor for spoken production" (2014: 68) and situates other common OILE activities such as listening to music or chatting on social networks as also being within the B-level range (2014: 71, 85).

Finally, the studies carried out by Sockett and colleagues also provide significant evidence of correlation between OILE and language proficiency (2014: 63-110), indicating that regular OILE practitioners understand English more easily and with greater accuracy than non-regulars (97-101) and produce more native-like forms and expressions than non-regulars (105-110), though whether this be a cause or a consequence of regular OILE activity remains conjecture (100). Based on empirical evidence comparing two groups of learners, one of which has learnt English exclusively through OILE-type activities and the other which has learnt English primarily in top-level private English schools in Brazil, Cole & Vanderplank (2016) go so far as to declare that

> *the autonomous learners were not only able to demonstrate significantly higher levels of English language proficiency as demonstrated by results of a large battery of tests but that classroom-trained learners appeared to retain a number of fossilized L1 errors in their English performances, even after years of instruction, which were not evident in the data from the autonomous learners. Lastly, an important conclusion to be drawn from this study concerns the findings that the proficiency levels achieved by FASILs [fully autonomous self-instructed learners] were not simply a matter of hours spent with informal sources but had more to do with mode of learning and self-determined instrumental motivation. Taken together, these findings challenge the current orthodoxy on the limitations of naturalistic language learning and highlight the extent to which the affordances of the Internet have transformed the opportunities for informal, independent, high level foreign language acquisition* (41).

Such finding lead to identification of a second set of interactions, centered on the L2 itself and interacting with digital literacy (as seen in Diagram 3), where language autonomy, proficiency and use mutually inform each other in the interest of L2 development. This could be illustrated as follows:

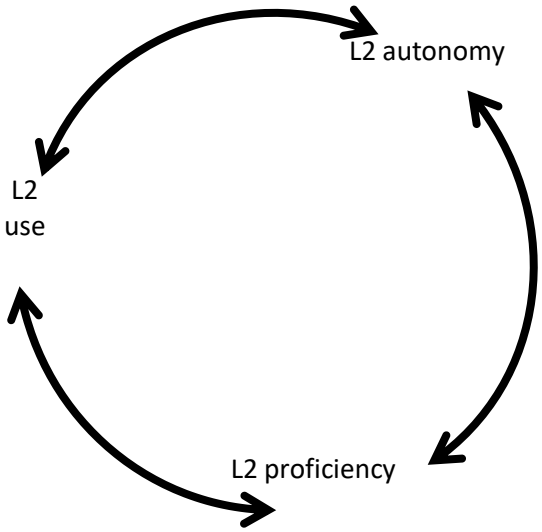


Diagram 4: L2 proficiency, use and autonomy interactions

In the study detailed below we will be looking at the interactions between these aspects of the learners L2 and how they may influence each other.

Methodology: questioning LRC students about their OILE practices

OILE was initially described and the study then replicated for confirmation by Toffoli & Sockett (2010, 2015) at the University of Strasbourg, using questionnaire methodology and descriptive statistics. On a much smaller scale, we decided to reuse their questions to explore the uses of Web 2.0 tools by our LRC students (see Appendix 1). These questions target different possible online activities in English and seek to estimate their frequency, using a 4-point Likert scale. In lieu of questions concerning specific affordances of Facebook from the original questionnaire, we substituted questions addressing the notion of autonomous work in both informal contexts and the formal LRC context they were enrolled in (questions 15 to 19).

As indicated in section 0 above, in an OILE context, we would expect digital literacy to have significant leverage on the repertoire of online activities foreign language users will engage in. Based on this assumption we chose to study a group of second year computer-science students attending their compulsory English sessions at the Physics department LRC of the University of Strasbourg. Their computer-science major attests in principle to their digital literacy, which could consequently lead them to engage in various, numerous and perhaps original forms of OILE. The participants, aged 18 to 25, include four women and twelve men. This type of case-study approach (a single group with only 16 members) does not allow for reliable treatment with descriptive statistics and this was not our intention. However, while perhaps not revealing much about the population of language learners as a whole, small-scale and case studies can have a direct bearing on theory, as Larsen-Freeman (2014: 17) has stated and van Geert (2011: 276) demonstrated. We therefore consider these students' comments to be pertinent insights into how L2 development is shaped through use (Tomasello 2009), although we do recognize the subjective nature of their representations.

The five open questions used for this study were:

1. Among the different ways you use English online outside the CRL[1]. what is your favorite one? Why?
2. When did you start practicing this particular activity and why?
3. Do you feel it helps you to practice English at the CRL in any way? Why?
4. Have you written a text about this particular activity for your personal file at the CRL? Why?
5. Do you feel at ease with the notion of "autonomous work" in the CRL? Say why?

The intent of questions 1 and 2 were to give us further information about preferences and degree of implication in the specific kinds of OILE activities declared, as well as some idea about how long they have been involved with them. As these activities may function as attractors, it was expected that answers to questions 3, 4 and 5 would provide information about their perceptions of the possible positive or negative incidence that these could have on their language work in the LRC context and also possibly point to control parameters (cf. section 0). Question 5 was also to inform us as to the ways students see their own learner autonomy and how they situate the overall teaching / learning that goes on in the LRC.

Questionnaires were exploited primarily for the content of answers to these 5 questions. The information contained in the first 14 questions was retained in order to provide background about students, but does not constitute the main focus of this paper. Answers to the 5 open questions were paired with information concerning gender, nationality, number of semesters enrolled in an LRC course and CEFR-level self-assessment. They were first run through some simple concordancing tools (using AntConc3.4.4), then analyzed both thematically as a whole (all answers to one question) and individually (answers to all questions given by the same person).

Results

Results as related to digital literacy

The data collected in the first part of our questionnaire attests to our group's own perception of their high level of digital literacy. When asked if they engage in online reading and listening activities (questions 2 & 3), all of them (n= 16) declare they do so "very often". As far as contributing to a forum in English is concerned (question 4), 13 out of 16 assert that they do so "quite" or "very often" on subjects such as "gaming" and "programing". Two students declare they would "rarely" do so. One says he "never" does, adding that in his opinion "forums are obsolete". Members of our group also use various online text messenger services to chat online in English in the same proportion. The data collected for this group is seemingly representative of the specificities of IT students, both in confirmation of similar sample groups (IT students at a technology institute in Strasbourg), and in counter distinction to other populations (an overall sampling of university students in Strasbourg and Karlsruhe and previous studies concerning specifically humanities and social sciences students)[2].

The various students sampled locally over the last 7 years (N= 1372) report from eleven to seventeen hours of online activities in English per week, averaging to around 2 hours per day, regardless of their major. Two factors make the present group stand out from the existing data collected at the University of Strasbourg. One is reference to reading mangas online, which had not been

[1] In our questionnaire, we kept the more familiar French abbreviation for the language center the students attend: CRL for "Centre de Ressources en Langues", rather than LRC.

[2] Our thanks to Meryl Kusyk for this information on data collected in the context of her Masters and Doctoral dissertations.

encountered in previous studies and involves three of the sixteen students questioned. The other is the IT students' participation in virtual worlds. While only 7.9 % of the (humanities and social sciences) sample questioned by Sockett & Toffoli in their 2012 study declared they participated "very often" in a virtual world[3], half of our group (8 out of 16) say they do so "quite often" or "very often," approaching the 61.8% declared by other IT students at the university in 2011 (Kusyk, 2012). Our group gives 11 different examples of virtual worlds (*League of Legends*, *World of Warcraft* and *Counter Strike Global Offensive* heading the roster for number of citations). However, only two cite multiplayer gaming in a virtual world as their favorite online activity. As all of these virtual worlds require fairly elaborate comments, instructions or interactions in English, we can take these examples as illustrations of the link between digital literacy and increased L2 use, although the question of causality remains open.

The following extract about blogging also comments on the relation between digital literacy and L2 use, perhaps even L2 proficiency:

> *I was thinking about a way to classify, organize and share with the others all my works and programming. A blog was the ideal solution. … When I have time I like to work on a new article for my blog. It relax me and force me to go everytime a bit further to better express myself* (Student 1)[4].

The link between this student's technical activity and his (self-directed) efforts to use the English language are clearly expressed. In the discussion section we will return to the question of how these interactions affect the perceptions of the autonomous language development of the learners involved.

Results regarding L2 proficiency

The students in our study rate their English proficiency in the whole range from A2 to C1:

Level	A2 / B1	B1 / B2	B2	B2 / C1	C1	??
Number	2	3	1	2	5	3

While three students are apparently unfamiliar with the CEFR levels or unsure of how to self-evaluate, most of them do identify a level, although the written evidence they provide in answer to the five open questions in several cases tends to correspond to the levels indicated more in terms of fluency than in terms of accuracy.

Only six students made explicit comments about their proficiency in English. These are cited below:

> *... there are just a couple of students who match my level in English, and even so it's hard to have meaningful discussions. My level has sadly decreased since I started university* (Student 2: C1).

> *It's not to be pretentious, I feel my English is lacking a lot, but I'm already doing everything in my life in English, practicing that way. Work at the CRL*

[3] This can be compared to somewhere between 6.1% (for multiplayer video games with spoken interaction) 10.4% (for solo video games) and 12.6% (for multiplayer video games with written interaction) from a sampling of the overall student population (n=953). Data provided by Meryl Kusyk.

[4] All student quotations are direct transcriptions, with no modification of errors or non-standard language.

feels pretty forced and you have to communicate with unmotivated people, often having an inappropriate level for you to make progress (Student 3: C1).

… my mistakes are a little bit more sophisticated than my word corrector detects (Student 4: C1).

my weakness in English is my speaking skill (Student 8: B2).

I still do a lot of mistakes when I write something so I think I must work on grammar and spelling ... (Student 9: A2/B1).

I dare say my English is rather good (Student 16: C1).

Results concerning autonomy

Among the 2894 tokens in the tiny corpus of responses learners provided to our five questions, the word 'autonomous' occurs only 5 times and its French translation 'autonome', once. Of the 5 occurrences in English, 4 collocate with 'work' and can be treated as citations of the question posed (Do you feel at ease with the notion of 'autonomous work' in the CRL?).

As far as English for me is a pleasure with "autonomous work" I can do things that please me. Nevertheless I consider that students with lower level need more guidance and maybe more structured courses (Student 4).

I do autonomous work by myself, I need to increase my English, I know it, But I can do it alone (Student 7).

I feel at ease with the notion of autonomous work and I like the University system wich is a lot about personnal work but I still do a lot of mistakes when I write something so I think I must work on grammar and spelling but I find it hard to motivate myself on this (Student 9).

I guess I now have the habit of working on my English by myself. I'm doing that for several years now and I feel comfortable with this notion of "autonomous work" (Student 12).

'Autonomy' and synonyms or near-synonyms such as 'independence' or 'self' yield no hits at all, 'self' occurring only as an affix in 'myself' (5 times) and 'yourself' (once). There are 3 occurrences of 'alone' and 'personal' (or orthographic deviations of personal) occurs 7 times, 4 times collocating with 'file' in direct answer to the question using that term.

Findings: developing autonomy with OILE

In order to understand how OILE practice interacts with autonomy we have examined student answers that point toward phase shifts in their learning trajectories.

L2 Proficiency in relation to autonomy

From a CDST perspective, it is particularly informative to examine changes of direction in a (learning) trajectory in order to determine the control parameters and the attractor states. Identification of these crucial elements in the process can ultimately lead to pertinent intervention in the system (Larson-Freeman & Cameron 2007: 54). Discovery of the accessibility of out-of-classroom activities

may be one such element that actually triggers engagement in these practices, as indicated by Student 2: "I started reading English novels about 8 years ago, because I'd discovered an interesting and funny book series *that was easy to understand*[5]." Within the autonomous practices that OILE encompasses, students would appear to independently target the language level of contents that correspond best to their cognitive capacity and perhaps also to their zone of proximal development, as defined by Vygotsky. Student 4 echoes this perspective as she states: "I consider that students with lower level need more guidance and maybe more structured courses".

OILE studies work from the premise that a certain level of L2 proficiency is necessary for students to really engage in this type of learning and seem to situate it in the 'intermediate' (B1 / B2) range (Toffoli & Sockett 2010, 2012; Sockett 2014: 100, 103). Our students' debuts in OILE provide evidence that they also seem to consider a certain threshold level of L2 proficiency to be a prerequisite to undertaking regular online activities in English. They indicate having begun OILE "as soon as I was good enough in English to write correct sentences" (Student 4), or "at the end of High school. At this time I had enough knowledge to start learning by myself in addition to what we do in class" (Student 12). Student 3 declares: "I've always liked videogames and around the age of 15 *I realized that I could play them in English while understanding the whole story*[6]. At that point I just stopped caring about French."

It seems that Student 3 started gaming in French, perhaps attempting the occasional L2 switch, before opting for English as his 'gaming language'. Student 8, a B2-level student who started watching series "5 years ago", gives a good example of adaptive using/learning strategies as he states that "I tried VO [original, undubbed version] once to know if I could understand and I could and it was a lot better to watch movies and TV show in VO, so I continued." These comments are indications of *phase shifts* or *bifurcations* (cf Larson-Freeman & Cameron 2007: 45) in the state space landscape of these students' English learning systems. They are typical of the comments we hear from our students and illustrative of the interactive, non-exclusive, multi-channel, dynamic strengthening of L2 skills once beyond a threshold level. We witness here students' perception that a certain proficiency in English allows them to engage in OILE. Proficiency would thus appear to be a control parameter, an element that "will help keep the learning system moving across its state space" (Larson-Freeman & Cameron 2007: 54).

L2 use in relation to autonomy

In face of the elements presented in our student data, we would like to suggest at this point that if L2 proficiency influences the type of OILE activities the students engage in, L2 use in itself also develops learner autonomy in a dynamic way as each medium chosen by the user/learner presents particular affordances to be explored and exploited. These affordances can take many forms, both as they relate specifically to language learning and to other areas.

Specific language affordances cited by these students include learning vocabulary (Students 13 and 14), and particularly new expressions (Student 11), discovering accents and improving listening (Student 12), improving grammar and syntax (Student 14) and going "a bit further to better express myself" (Student 1). Other benefits include furthering a particular interest area where content is easier to find in English than in another language. Student 2 sums up what seems to be the situation for most of these students: "the things that interest me the most just happen to be in that

[5] Our italics

[6] Our italics

language." The case of mangas stands out for three of these students: "the most recent manga are in English" (Student 7), "it's really easier to find mangas translated in English than French" (Student 9) "Spanish and French translations [of mangas] are horrible" (Student 16). For Student 3, "playing games in English prevents translation inconsistencies and helps having a standardized way to discuss games worldwide. You also have access to way more content." Four of them indicate use of online sources for their IT studies: "for solved computer problem and for learn" (Student 5), "to get informations for my work in informatics science …, because everything are in English" (Student 7), "to find informations about the computer science homework I have to do" (Student 9), "learns different way of programming and to unbug programs" (Student 15). More general affordances of OILE activities include the idea that an "original text is better than translated" (Student 4), "being up to date with news," "discovering different point of view" and getting "ideas to write essais" (Student 14) or "talk[ing] and debat[ing] with people about subject I like" (Student 6). Finally, five students mention factors that would often be concerned deterrents from learning, "attractors such as preference for watching television over doing homework" (Larsen-Freeman & Cameron, 2006: 54): "because it's entertaining" (Student 8, on watching TV shows in English), "a cool escape from the everyday life" (Student 10, on meeting new people online), "to evade the real world" (Student 11 on watching series), "to kill time" (Student 9, on reading mangas online), "my main time killer" (Student 3, on playing video games in English). The leisure properties of the activities are causing them to function as attractors; their foreign language content and positive feedback are allowing them to create virtuous cycles (Hiver, 2015: 23) in terms of language development.

L2 use and proficiency in an OILE context thus appear to attest to a certain level of L2 autonomy, but also to lead to L2 autonomy (as seen in Diagram 4) and thereby to learner autonomy, as illustrated in the following diagram.

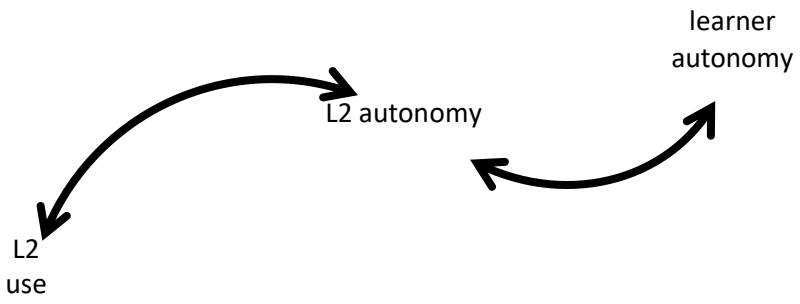


Diagram 5: Developing learner autonomy through L2 use

Developing L2 proficiency and autonomy in association with the LRC

So then, is there a role for the LRC in this overall economy of personal, autonomous language development? Our students' answers to questions 3, 4 and 5 give us some hints. When asked whether they think practicing English in the LRC is helpful for them in any way, 13 students out of the 16 asked do respond positively. Student 6 sums it up thus: "Yes, I have more vocabulary it makes me practice what I learned in English and then I'm able to use it in different context/subject." In the same vein, when asked if they wrote about their OILE activities in their log, Student 11 answers: "Yes, I did. I made few texts about my favorite series. I did this because watching series is a big part of my life, so it sounded pretty obvious to write about it." OILE and English learning in the LRC appear to be not only highly compatible for these students, but also complementary, in that the one brings something to better the other. It would seem that these students have developed a form of independent learning which is a gate to greater autonomy, both learner autonomy and general autonomy. This gives some learner-based credibility to Diagram 2. Students' personal learning systems, integrating both OILE and formal learning settings (as well as other OCLL perhaps) have allowed them to attribute immediate meaning to activities undertaken in the LRC. They feel comfortable in this environment whose role is to foster the autonomous individuation of the learner within the broader institutional structure it belongs to.

However, once again, in order to understand the complexity of learner autonomy, CDST invites us to look at the non-standard answers, at the students who do not perceive the relevance of learning within the more formal setting of the LRC. For example, Student 8 does not find it helpful to practice English in the LRC in any way: "Nope, not enough oral practice, my biggest weakness." He seems to have missed out on all the scope offered in the LRC specifically to practice speaking. Whether this be due to his own blinders, to teacher negligence or to some other factor begs the point, especially as other students, for example Student 2, indicate that "the CRL is the only place where I have actual conversations in English." It would seem that a truly autonomous learner might have the wherewithal to discover how to work on weaknesses in the LRC.

This miscomprehension of what can be undertaken or improved in an LRC seems also to be shared with Student 16, who answers: "Absolutely not, I dare say my English is rather good and spending my time here would be a complete waste of time were it not because presence is grated" (sic: graded). In response to whether he feels at ease with the notion of autonomous work in the LRC, he elaborates:

> *I understand the notion but I don't agree with it specially because I have no idea of what I should do. Should I improve my inglish? How? Learn new words? I'm not going to read a dictionary. Read books or articles in English? I already do that. Want me to write about it? I don't think writting each week a resume of the new chapter of whatever it is I'm reading will either help me improuve nor please our teacher. This system might be okay for those who don't use English regulary but for me its a nightmare.*

This student seems to lack sufficient learner autonomy to really embrace all that learning a foreign language might entail and provide. His non-standard spelling and register indicate that he could benefit (for example) from extensive writing practice (which he rejects outright). His lack of insight into means of vocabulary improvement (reading the dictionary) indicates that some expert counsel could be of use. His reference to pleasing the teacher calls into question the degree of autonomy he actually possesses, despite insinuations that he'd be better off just using his English outside of the system. Above all, his approach seems to miss out on the intrinsic interest of language learning in all

its intercultural social dimension. Here, the dynamic process of autonomy sketched out in Diagram 2 appears to be functioning in reverse: limitations on learner autonomy affecting both personal and L2 autonomy.

This comes in strong opposition to Student 12 (quoted above) who sees his OILE activities as complementary to learning in a formal context: "I really started this way of learning English at the end of High school. At this time I had enough knowledge to start learning by myself in addition to what we do in class." It thus seems logical to him that a place such as an LRC, where he can choose the subjects and activities he feels like working on, exists: "I guess I now have the habit of working on my English by myself. I'm doing that for several years now and I feel comfortable with this notion of 'autonomous work'."

Nonetheless, Student 11 warns that OILE-related autonomy alone is not enough to attain full learner autonomy: "Actually I feel pretty ill-at-ease with this notion because in general I am not an autonome person, so it's hard for me to find something to do without no one telling me what I should do." As stated by Little (2013) and Dam (2013), learner autonomy is a posture that can (and probably should) be fostered in academic contexts, in all of its socially challenging and engaging dimensions.

To conclude this section concerning the use of LRCs in developing L2 proficiency and autonomy, the words of 18 year-old Student 4, the youngest in the group, can be encouraging for teachers and learners: "Yes, I feel extremely at ease as I've been studying English for almost 13 years and I know very well what I can or need to improve. ... Anyway we are grown-ups and we should know ourselves our week points and we should find ourselves the way to strengthen them." In both these examples (from students 11 and 4), the dynamic interactions between the three previously identified types of autonomy can once again be seen at work.

Conclusion: Towards a model for autonomy and language development in higher education today

At the beginning of this chapter, we asked the question of whether online learners require or acquire autonomy in relation to the online practices they engage in. In the process of trying to answer, we have called on various conceptions of autonomy, on complex dynamic systems theory, language resource centers, out-of-classroom language learning and the online informal learning of English. We have questioned 16 university students and looked at L2 proficiency and digital literacy and tried to link these threads into a coherent whole, along the lines of the "complexity thought modeling" advocated by Larsen-Freeman & Cameron, 2006: 41). Keeping in mind the limitations of our data that is based solely on students' perceptions and declarations, these insights nonetheless provide pertinent material for reflection. While we won't succeed in solving the causality problem, which as we have seen is in any case for CDST a moot question, we shall attempt to schematize the various points discussed in light of the data and findings produced, to portray autonomy and language learning as a dynamic, iterative, interactive process.

We have seen that general, learner and L2 autonomy all appear to interact with each other in bidirectional processes. This led us to propose Diagram 2, in which there is no predominant or leading area of autonomy. Although a certain degree of general autonomy may be necessary before one can begin to use a second or third language autonomously (cf Benson 2012), the language autonomy one acquires can lead to both increased general autonomy and to increased learner autonomy, as we saw in section 0 above. This can result in virtuous spirals that set themselves up, so

that (say) general autonomy lead to making choices about which activities to do in the interest of learning (learner autonomy), leading in turn to risk-taking in expressing oneself in English, for example through discussions or interacting in forums (L2 autonomy). It can also result in more vicious circles where limited learner autonomy, as indicated by the need to "please our teacher" (Student 16) or "know what to do and what the teacher want" (Student 15) lead to limiting opportunities for improvement in writing or speaking and thus to more limited L2 autonomy and arguably more limited general autonomy.

A second set of interactions, illustrated in Diagram 4 and centered on the L2 itself, combines with the first. Here, language autonomy, proficiency and use mutually inform each other on the trajectory of L2 development. An example here is the realization that a certain level of L2 proficiency allows one to switch languages to play a favorite video game, read mangas, interact in forums or meet new people online in English, which then leads to both increased L2 use and increased L2 autonomy, both of these also reflecting back on L2 proficiency. As was described above in Section 0 and illustrated in Diagram 3, in the case of OILE, this circle is also influenced by digital literacy. The resulting double interaction is illustrated below (Diagram 6).

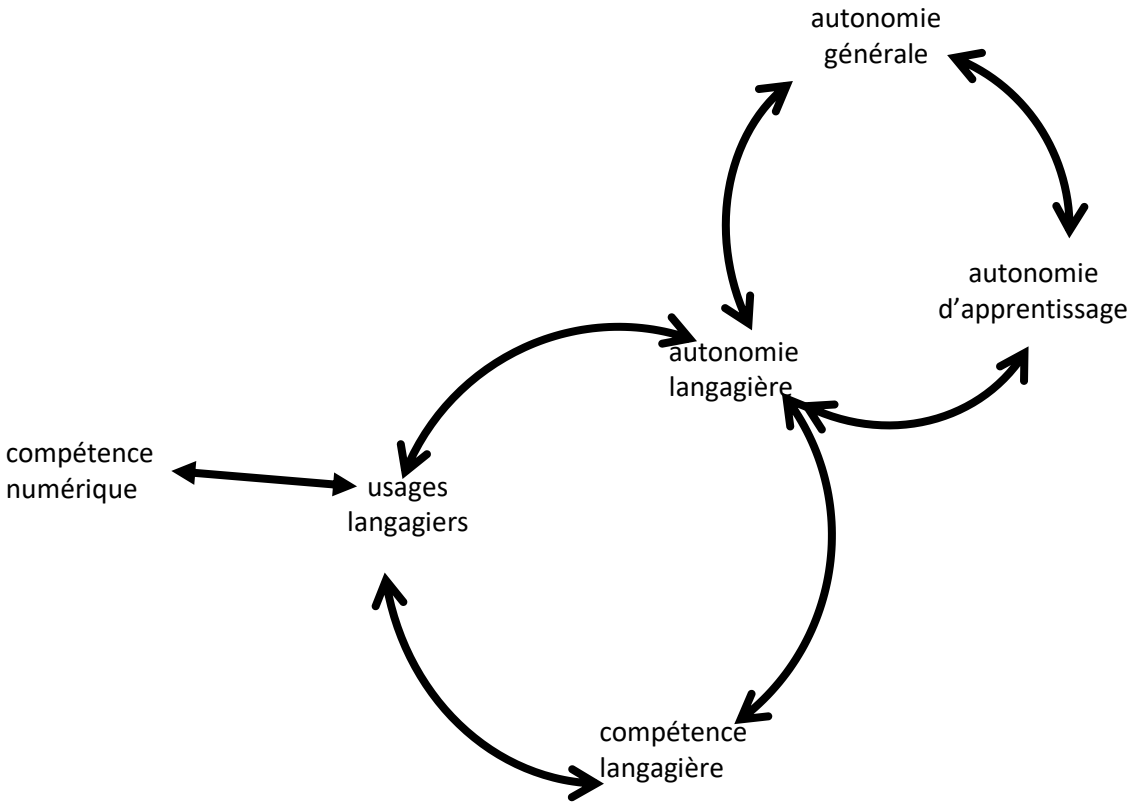


Diagram 6: Interactions between different types of autonomy and proficiency

As indicated previously, we consider OILE activities to be attractor states, directing momentum toward themselves and indicating the control parameters they are linked to: L2 use, L2 proficiency and L2 autonomy and by extension, due to the interconnections that exist, learner autonomy and general autonomy. Thus as one becomes more proficient in one of these areas, the path of least resistance becomes the one that is also helping the individual to progress in favor of another

trajectory. This could be the case with our gamer (Student 3), where the attractor may be to get further onto some next level, despite the difficulties encountered. In order to have access to consistent and standardized information, the player may do it in English, even though that might initially have been a deterrent. As the player's English becomes more proficient, it becomes easier and easier to do this, and so he continues. Meanwhile the secondary gains in language proficiency also become a factor in the player's choices to continue playing (and perhaps to start other activities) in English, making the attractor even stronger.

For series addicts, such as Student 11, the attractor of "avoiding the real world"[7] was found to be "fun and educational", allowing her pastime to become "a big part of my life". According to her, giving in to an attractor has provided gains in L2 use and proficiency, particularly in terms of "turns of phrase." And despite her declarations that "in general I am not an autonome person," we would argue that she in fact demonstrates both learner autonomy, in choosing to carry out these activities, and L2 autonomy through her "authentic and spontaneous L2 use … [with] access to a wide range of discourse roles, initiating as well as responding" (Little, 2015), when speaking English with classmates and writing "texts about my favorite series".

In both of these cases, interactions between different aspects of autonomy and language point to the control parameters that are driving the OILE system: L2 use, L2 proficiency, L2 autonomy, learner autonomy and general autonomy. Digital literacy is almost superfluous: a necessary initial condition that allows access to the types of language use and autonomous learning encountered.

As we have seen, it is impossible to describe in general terms what is at work within each individual learning system as each learner develops in his/her unique and special way. However, it seems that our approach could be useful as part of a generalized theorization attempting to understand individual needs regarding autonomy and L2 development in OILE, especially when associated with the LRC context.

Enabling students to become more aware of their own strengths, both in terms of L2 proficiency, autonomy or language learner autonomy by collecting data about OILE activities they engage in seems a useful track towards fostering students' empowerment. Whether through soliciting written or verbal commentary, in class or through individual interviews, an enhanced awareness of the dynamic interplay between these factors could help teachers to become better coaches and advisors and aid students in building positive attitudes about their own L2 achievements as well as their learner and L2 autonomy. Furthermore, heightened awareness might enable them to seize new L2 opportunities in a formal context they mightn't have felt interested in (such as the LRC) or capable of conducting in their own informal (OILE) setting. In the same way, reinforced acknowledgement of autonomy issues and how to support them is necessary on the teachers' side. Creating an informed and open space for dialogue with students allows teachers to develop a coherent posture offering both learner guidance and more specific L2 counselling or instruction, dependent on the individual needs of students.

[7] All quotations in this section are the students' own words.

Appendix 1: Questionnaire

Use of English online in your free time[8]

Please fill out this questionnaire which is about how you use English in your personal private use of the internet. For many of the questions you just have to circle a number from 1 to 4 which indicates how much you agree with the statement.

1= I don't do it. 2=I do it rarely (less than once per month). 3=I do it quite often (1 to 3 times per month). 4= I do it very often (once per week or more).

If you do not answer "1" to some of the questions, there is a follow-up question asking for more details. Thank you for taking part.

1. age …… gender M/F …… nationality …… level in English A1/A2/B1/B2/C1/C2 ……

2. Number of semesters spent in a CRL: ……

3. I read written documents in English on the internet 1 2 3 4
   examples ……

4. I listen to English on the internet 1 2 3 4
   examples (films, music, TV etc) ……

5. I contribute to forums in English 1 2 3 4
   On what subjects? ……

6. I use an instant messenger text service to chat in English with friends 1 2 3 4

7. I chat online in English with people I have never met in person 1 2 3 4

8. I use voice services to talk to people in English (MSN, Skype etc) 1 2 3 4

9. I participate in a virtual world where I use English 1 2 3 4
   Name of virtual world (Second Life, WOW etc) ……

10. I use English pseudonyms and avatars 1 2 3 4

11. I exchange e-mails with friends in English 1 2 3 4

12. I write a blog in English 1 2 3 4

13. I leave comments on other people's blogs in English 1 2 3 4

[8] The first 14 questions in this survey are those used by Toffoli & Sockett (2010, 2015) in their 2009 and 2012 surveys. The final 5 questions were added for the purposes of this study.

14. I use a social networking site like Facebook to communicate with English speaking friends
    1 2 3 4

    Name of social networking site (Facebook, Myspace, Bebo etc) ……

15. Among the different ways you use English online outside the CRL what is your favourite one? Why?
    ……
    ……
16. When did you start practicing this particular activity and why?
    ……
    ……

17. Do you feel it helps you to practice English at the CRL in any ways? Why?
    ……
    ……
18. Have you written a text about this particular activity for your personal file at the CRL? Why?
    ……
    ……
19. Do you feel at ease with the notion of "autonomous work" in the CRL? Say why?
    ……
    ……
    ……

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