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The Evolution of Learner Autonomy in online environments: A Case Study in a New Zealand Context

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Abstract

With the advent of technologies, language learners are faced with unprecedented opportunities and a wide range of alternatives to engage with in their self-directed learning. However, a review of the literature indicates that studies investigating how learner autonomy is shaped and reshaped in online learning environments are under-researched (Reinders & White, 2016). Using a case study method, the primary objective of this study is to examine how a learner engaged with technology-mediated environments to meet his learning needs and goals and how his autonomy evolved in online environments. A qualitative analysis of the interview data collected at two different timescales reveals new developments in the learner's autonomous learning. Instead of using limited online materials, the learner became a critical user of multiple online sources. Additionally, the learning conditions he was exposed to in New Zealand fostered an interdependent and social dimension in his autonomous learning. By the end of this research study, he was also found to be more capable of regulating his self-directed study. The results corroborate the argument that the notion of learner autonomy is fluid and dynamic, suggesting that apart from psychological factors of the learner, environmental factors, e.g. the guidance from the teacher and learning conditions also play a critical role in the formation of different dimensions of learner autonomy.

Key words: learner autonomy; online environments; language learning; case study

Learner autonomy which requires a transition from teacher-control to learner-control is viewed as a prerequisite for success in learning. The shift of locus of control to learners reflects changes in education towards a more learner-centred teaching and learning where learners are expected to assume greater responsibility for, and take charge of, their own learning. With the advent of technologies, learners are faced with unprecedented opportunities to conduct independent learning. Educational technologies, e.g. Moodle, Blackboard, Screencasting, MOOCs etc. (see Bustamante, Hurlbut & Moeller (2012) for details) have extended learners' access to learning into their own time and space. An examination of the literature indicates a clear need for a study investigating how learners engage in the self-initiated use of technologies to facilitate their language learning (Reinders & White, 2016). This research study aims to fill in the gap in the literature, examining how learner autonomy intertwined and evolved with the modal affordances of technology-mediated environments.

This study is significant in theory and practice. Theoretically, the empirical evidence provided by the study will contribute to our understanding of different facets of learner autonomy in online environments and throw light on affordances of technologies for learner autonomy. More practically, findings from the study may help educators develop appropriate curricula and create optimal learning conditions for learners to exercise agency in their learning.

Review of Literature

Understanding learner autonomy

Despite a unified recognition of the importance of learner autonomy in education, there is little consensus in terms of its definition. The first and most frequently cited definition was proposed by Holec (1981) who defines learner autonomy as "the ability to take charge of one's own learning" (p. 3). There are two key elements in this definition. First, it is the association of autonomy with an attribute of learners. That is, learner autonomy is perceived as a personal trait that an individual possesses; other environmental variables, e.g. learning contexts, the role of teachers, teaching methods and tasks design etc. are disregarded. Another dimension is the degree of taking control. In his view, "autonomous learners assume responsibility for determining the purpose, content, rhythm, and method of their learning, monitoring its progress and evaluating its outcomes" (p. 3). In recent years, criticism has been levelled at this notion of autonomy. It is argued that the selection of tasks and materials requires expert knowledge and expertise; thus most of the characteristics and traits attributed to the "autonomous learner" would merely represent a romantic ideal which does not align with reality (Illés, 2012).

More recent discussions consider autonomy to be a relative term (Nunan, 1996), contending that autonomy is not a product ready made for use or merely a personal quality but a process (Benson, 2007). It is argued that autonomous learning is achieved when certain conditions are obtained. These include psychological factors (e.g. learning strategies, motivation, and attitudes, etc.) on the part of the learner and also environmental factors like an appropriate task design, optimal learning environments, a political power structure, etc. (Hamilton, 2013; Oxford, 2008). This view of learner autonomy acknowledges that autonomy "is learned at least partly through educational experiences [and interventions]" (Candy, 1991, p. 115). Benson (2001) offers arguably the most comprehensive definition of autonomy as "a multidimensional capacity that will take different forms for different individuals, and even for the same individual in different contexts or at different times" (p. 47). This definition includes both personal and contextual dimensions of autonomy,

highlighting the fact that the notion of autonomy is complex and dynamic. This study adopted this dynamic view of learner autonomy in the investigation, focusing on the evolution of a learner's path toward autonomy in online learning environments.

Affordances of educational technologies to learner autonomy

Originally coined by Gibson, the term, 'affordance', has appeared with increasing regularity in a wide range of academic discourse. Gibson (1979) defines an affordance as "what it *offers* the animal, what it *provides* or *furnishes*, either for good or ill … It implies the complementarity of the animal and the environment" (p. 127, italics by Gibson). An affordance is thus seen as properties of the environment relative to an active, perceiving organism in that environment. According to Van Lier (2000), what becomes an affordance depends on "what the organism does, what it wants, and what is useful for it" (p. 252). An affordance exists as long as the person (or animal) can take the necessary actions to utilize it.

A number of scholars (e.g. Benson, 2011; Reinders & White, 2011; 2016) have recognized the enormous potential of technologies for language learners to exercise control over their own learning and to enhance the learner's freedom of choosing. Learners, for instance, can work at their own pace and choose their own place and circumstances to conduct to their learning. The extensive range of online learning materials means that learners could select what is valuable and worth doing according to a personally held criterion. Additionally, educational technologies expose language learners to a digital, social environment where they could engage in the real world and meaningful interactions with native speakers. Technologies such as video-conferencing software make it possible to speak in real time even if separated geographically. Other related online tools such as discussion forums and online chat environments, provide language learners with sociable, collaborative and authentic learning opportunities where they can work collaboratively and take joint responsibility for learning (Chan & Chan, 2011; Cheng, Paré, Collimore, & Joordens, 2011; Little, 2001). Murray (1999) predicted that educational technology is an effective purveyor of learner autonomy.

Whilst technologies have the potential for facilitating learners to conduct autonomous learning and propelling a shift from learners being a passive recipient of content knowledge, the actualization and effective utilisation of the technology-based learning environments hinge upon the active learner and other environmental factors, e.g. tasks and curriculum design. A review of the literature indicates that it is not clear how language learners engage in the self-initiated use of technologies to afford their language learning. Furthermore,

investigations of learner autonomy as a dynamic construct have largely ignored in scholarship. Using a case study method, the primary objective of this research is to address the research question: What changes occur in the learner's self-directed learning in online environments as a result of the new learning context, New Zealand? In order to answer the question, two subsequent questions were addressed: (1) how does the learner conduct his self-directed learning in technology-mediated environments in China? (2) how does the learner conduct his self-directed learning in technology-mediated environments in New Zealand?

Current Study

Justification of the case study research method

As afore-mentioned, the purpose of this qualitative inquiry is to examine the way a learner conducted his autonomous learning in online environments in two different contexts and detect the evolution of learner autonomy. To this end, the case study research method was employed. As this inquiry was exploratory in nature, seeking to provide an in-depth understanding of learner autonomy rather than extrapolate findings to other populations and contexts, it is hoped that the richness and depth of data this study generated will advance our understanding of the phenomenon under investigation and lead to "a full and thorough knowledge of the particular" (Stake, 2000, p. 2).

The participant and context

This inquiry was part of a multi-case investigation into language learning using technologies. It took place in the Department of Languages of a tertiary institution in New Zealand. The learner chosen for this report is Yong, because the data generated from him were more illuminating to the research question under investigation.

Yong was a 34-year-old male student from China. When the first interview was conducted, he had just been to New Zealand for 4 weeks. Yong started learning English from primary school and continued until he completed his Bachelor's Degree in Business in China. After graduation, he had worked for a company for a few years before he resigned to set up his own business. Having operated the business for several years, he decided to re-examine his career focus and chose to pursue a qualification in Professional Accounting in this institution in New Zealand. Due to a lack of language competency, he was required to complete an English programme before he was eligible to be enrolled into the degree course. His long-term goal was to "secure a job and settle down in New Zealand" (Interview I) with his family.

The English programme he was studying in was called English for Academic Purpose (EAP) at level 4. According to New Zealand Qualifications Authority (n.d.), "this qualification is at a level comparable to the Common European Framework of Reference mid B2". The programme documents of the department revealed that a full-time student had 16 contact hours per week in the classroom and they were also expected to do 16 hours of self-directed study per week. In order to graduate and obtain a level 4 certificate, a full-time student needed to study two credit-bearing courses, each worth 30 credits over 18 weeks. The focus of one course was on academic skills. To pass the course, students needed to sit a battery of 8 summative assessments and complete a research project. Another course targeted at oral and text skills, requiring students to complete on-going ePortfolio assessment tasks which were spread over the semester. The ePortfolio consisted of 2 self-reflection tasks and 16 inter-related, topical, skills-based tasks with 4 tasks for each of the following four language skills: speaking, listening, reading and writing. These tasks entailed considerable collaboration among students; therefore, teachers usually used in-class time to set up groups and to explain task requirements. Students would then complete these tasks outside of class in their own time individually and collaboratively. By the end of the semester, students needed to upload all their completed tasks onto their personalized Google site, the platform chosen by the programme for the ePortfolio assessment. The present study focuses specifically on the process of completing these ePortfolio tasks.

Data collection procedures & instruments

To ensure the credibility and trustworthiness of the results, two in-depth interviews were conducted on different timescales over a period of 20 weeks, with each lasting approximately 60 minutes. Both interviews used semi-structured, open-ended interview guidelines. The first interview tapped into the learner's online learning experiences in China while the second one focused on the New Zealand context. Interviews are a particularly suitable method for capturing the complexities of an individual's experiences. Although the same core interview guidelines were used, the format was kept flexible to allow the conversations to develop naturally and extensively and to enable the participant to guide the format and content. Subsequent questions were also added to the interview guidelines following the first interview for further information. Both interviews were conducted in English and were recorded with the permission of the participant. Additionally, course documents, the ePortfolio tasks, learning appts and websites, were also used.

Data analysis

The principle of qualitative data analysis (Lincoln & Guba, 1985; Patton, 1990) was followed to analyze the data collected. I started with open coding the first set of data. This involved affixing codes to the units of analysis in the data which could be single words, short phrases, complete sentences, utterances or extended discourse. The open coding was then followed by category construction where I grouped the codes denoting similar themes or concepts into tentative categories. They were then tested against the second set of data to see if the tentative categories exist and held up. When new tentative categories were identified, I re-examined the previous case and added the new provisional categories to the subsequent data analysis. This was a process of recursive analysis where data were read repeatedly; new codes were added until saturation had been reached, i.e. no new themes were found, and salient themes, categories or recurring patterns began to emerge. During this process, I stayed close to the data collected without imposing pre-conceived framework or structure on the data. The research question was frequently referred to and literature was revisited.

Drawing on Lincoln and Guba (1985), I used a number of measures to ensure credibility, transferability, and dependability of the qualitative analysis. These included (1) prolonged engagement and persistent observation; (2) rich and thick description; (3) member checking where each interview transcript was returned to the participant to check its accuracy, and his comments were incorporated in the data analysis.

In order to capture both patterns and examples, this report will balance the summary and quotation (Morgan, 1988) and the quotes will be taken directly from the data without the researcher's attention to the grammatical and linguistic errors in order to present the data in its entirety.

Results

The objective of this study was to investigate changes in a learner's path towards autonomy in online environments. In order to detect developments, I compared his online learning activities reported in the first interview (relating to China context) with those reported in the second interview (relating to New Zealand context).

Table one compares his self-directed learning activities in online environments in two different contexts. A closer examination of the data gathered revealed the following three new developments in his autonomous learning.

Becoming a critical user of multiple online resources

A noticeable development in his online learning was associated with his wider use of resources. As aforementioned, although Yong had started learning English since primary school, he "almost forgot all of it apart from some simple English vocabulary" (Interview I) due to a lack of English contact in his social and work environment in China. The prospect of changing his career direction and settling down in New Zealand with his family drove him to resume his English learning. To this end, he decided to resort to computers and the Internet for assistance and to do self-directed learning rather than adopt the traditional face to face mode of learning. He first sought advice on the best way to learn English using a popular Chinese Internet search engine, *Baidu*. He identified an online article written by a renowned Chinese teacher of English who argued that the best way to learn English was to receive sufficient inputs from listening and reading before putting in efforts to productive skills in speaking and writing. In Yong's view, the arguments presented by the teacher were "acceptable", "fascinating and different from the grammar-translation methods" (Interview I) that he used to be exposed to during his school years. He decided to follow the advice offered by this particular teacher. Reflecting on the journey, Yong felt that the advice he received from this teacher was very helpful and useful at that time and guided him through "to find out the way how other people learned English" (interview 1). Having decided the method, he then used the Internet as a learning resource centre for his self-directed English language learning. In order to improve his listening, he followed a link given by this online teacher and listened to free online listening materials. According to Yong, the listening materials covered a wide range of topics: "some is about life and businesses. Some introduce America" (Interview 1) and "the speaker read the article in two speeds, slow and normal" (Interview I). Following the advice of the teacher, he also bought a book online on pronunciation and a book series on vocabulary to improve his vocabulary size.

In the second interview, Yong reported that he had become "a more competent user of many online materials" (Interview II). His self-directed online learning included engaging in asynchronous online discussion forums on Moodle, the learning management system used by the department, using Google sites for his ePortfolio tasks and Quizlet to work on his vocabulary and spelling. He also learned on the course how to use the library databases to identify academic resources for his research. In addition, teachers on the course recommended a wide range of online resources and websites relating to language learning and language testing; hence, his online learning activities were no longer limited to listening and vocabulary exclusively but were extended to include all four language skills, academic study skills, and IELTS specific exercises. He commented that the variety of resources

recommended by his teachers enabled him "to consult different sites to seek advice on a variety of topics to suit my own learning needs whenever I identified a weakness in my learning or set a new goal" (Interview II).

Whilst Yong followed the advice and using online resources provided from one locally available expert in China, in the new learning context of New Zealand, he was exposed to multiple points of views and resources from across the globe. He had transformed from a limited online learner to a multi-source user and most important of all, he was able to explore resources available and make learning decisions on his own.

Table 1

Comparison of Yong's Self-directed, Online Learning Activities in China and New Zealand

	China	New Zealand
Activities	- Using Chinese search engines - Following the advice from a single online teacher - Purchasing a single set of learning materials - Using the online materials to work on his pronunciation, vocabulary and listening - Downloading free, online listening materials - Reading online materials on the best way to learn English - Learning alone and at home without plans	- Using English search engines alongside with Chinese search engines - Seeking advice from a variety of sources - Using a variety of ESL websites, e.g. ESL English Café, BBC radios and watching videos onYouTube to improve his listening - Reading articles from online magazines, ESL websites on best way to learn English - Purchasing second hand books online using TradeMe - Using data bases and library search engine to meet his learning needs - Using free online materials to prepare for IELTS exams - Connecting and chatting with other fellow students and friends using social media, e.g. "Wee chat" - Working in the library with other fellow students - Reflecting on strengths and weaknesses in his English - Initiating learning basing on his reflections - Planning and organizing his self-directed learning time

Becoming a collaborative online learner

Another evolvement was related to the way Yong conducted his self-directed learning. At the outset of the study, Yong reported that due to his introverted personality, when he was in China, he conducted all his self-directed learning in a home environment, in isolation and on his own. He described himself as a person who "was not good at social" and "learning outside home makes me feel nervous" (Interview I). He recalled when he was at school in China, his routines were to "attend class in the mornings and complete homework alone at home in the afternoons" (Interview I).

However, in the New Zealand context, teachers embraced learner-centred, constructive approaches to teaching and learning (Programme handbook). As described in the preceding section, the completion of the ePortfolio tasks entailed students working collaboratively and interdependently. For instance, they needed to do jigsaw readings and listening in groups. They were also required to give a group oral presentation and complete group seminar discussions for their speaking tasks. Their writing involved online peer-editing and contributing to online group forum discussions. As the course progressed, in the second interview (in week 20), Yong reported having spent considerable amount of time with his fellow classmates working collaboratively online or face to face in the library. He regarded himself as a highly competent user of computers, therefore he was always available to help other students who had problems with computer skills, e.g. setting up their Google sites, uploading completed work to the Google sites, sharing work with peers and using other digital tools. On the other hand, he considered speaking to be the weakest link in his language skills for which he received considerable support from his fellow students.

Yong started as a solo, independent learner working in isolation but towards the end of the study, he added a social dimension to his autonomy. He was not only able to take charge of independent learning on his own but also to work collaboratively and interdependently with others to attain a common goal. Yong seemed to benefit from this supportive community of learning. This may contribute to his positive and favourable view on working collaboratively:

> I like working with other students. It's a good thing that you can help other people. Secondly, it's good for me to practice speaking English. Especially, I enjoy reading opinions on the discussion board. Sometimes their views are different from me but I could learn from them. (Interview II)

Becoming a more capable manager and organiser

The final change was related to his use of metacognitive strategies. Reflecting on his learning in China, he described a typical learning day in China like this:

after the class I go home straight. I will do my homework after lunch. After that, sometimes I relax; sometimes I listen to music; sometimes I surf the Internet and at other times I chat with friends online. (Interview I)

He further commented that he tended to plan too much when he was in China. As a result, he could not implement and nor complete his plans. This made him "feel like a loser" (Interview II). It appears his learning activities in China were largely dictated by the course demand and teachers' requirements, and his self-initiated learning took place ad hoc without pre-planning and organization.

In comparison, the last interview revealed that he became more capable of managing time and planning his learning. He reported dividing his self-directed learning time into four blocks: completing course-related assignments, then engaging in self-initiated online listening which was then followed by self-initiated online reading and IELTS preparation. He allocated 2 hours for each activity and followed his plan through. Yong commented:

> I think I have changed my time management skill. In China, I can't focus on study and I always think about other things. I can't finish what I planned to do. But now through this semester I think I can manage my time better. (Interview II)

When asked the reasons for the development, he attributed this transformation to the course structure and teachers' guidance:

> This course helped me a lot. On this course, we have a lot to do. If I don't plan well, I will not complete work on time. Also, our teachers teach us how to manage our study. They asked us to write reflections and think about our learning. (Interview II)

Yong started as an ad hoc planner and follower of teachers' decision and had transformed to be a confident manager, capable of making decision about his own learning.

Discussion

The notion of affordance suggests a way of seeing the world as a meaning-laden environment which offers countless opportunities for actions (Hammond, 2010). Undoubtedly, technologies have offered unparalleled potential for language learners to conduct independent learning. However, affordances only define potential effects and they are not actual ones. The key to unlocking their potential is not the technology itself but the active learner. Learners have to stay active in order to detect the value of technologies and make decisions to fulfil the potential that the online environments have created for them (Van Lier, 2004). Evidently, Yong revealed different aspects of behavioural indictors as an autonomous learner. In both contexts, he took an active role and utilised learning

opportunities afforded by technologies. He was able to set up his goals for learning, made queries online, evaluated resources he identified on the Internet and made decisions about his learning. The technology-mediated environments served him as a resource centre where he could search and select materials for his self-directed learning, as a learning advisor/consultant that guided the direction of his autonomous learning and as a social platform where he engaged in academic discourse with peers. The benefits he received from this digital world attributed significantly to his ability to chart the path of his own learning.

Secondly, autonomous learning is by no means guideless and teacher less learning. It is essential that teachers create a learning condition whereby control over learning can be exercised by the learner and where the learner has the possibility of assuming responsibility. Basing on constructivist views, Savery and Duffy (1995) suggest four principles for technology-enhanced learning conditions: (1) learning is an active and engaged process. (2) learning is a process of constructing knowledge. (3) learners function at a metacognitive level. (4) learning involves social negotiation. The learning environment that Yong was exposed to in New Zealand seemed to meet these typical conditions which may have contributed to the evolvement of different dimensions of learner autonomy during Yong's trajectory, particularly collaborative autonomy. As mentioned in the preceding section, the course was structured with an expectation of students conducting a minimum of 16 hours' self-directed learning per week. For these self-directed study hours, the course required learners to complete 16 different on-going learning tasks, most of which learners had to work collaboratively with other peer students in their own time. The course structure and tasks on the course seemed to have created optimal conditions for fostering collaborative autonomy (Little, 2001). Similar findings were also reported in other studies (Beseghi, 2017; Lee, 2011; Sánchez-Gómez, Pinto-Llorente, & García-Peñalvo, 2017) where they revealed that learning tasks using social technologies can promote social interdependence and collaboration. Consistent with previous studies (e.g. Nguyen. 2012; Reinders & Balcikanli, 2011; Ribbe & Bezanilla, 2013), the results generated from this study favoured such an approach whereby teachers set some resources and the structure for activities and then learners produce a product. This seems to create conditions where learner autonomy could be fostered and promoted.

Conclusions

This case study reveals that Yong, acting as an active agent, availed himself of the unprecedented learning opportunities that technologies provided for him. From the

psychological perspective, he demonstrated his ability to make decisions and take control of his learning by setting goals and selecting his own materials. However, environmental factors also played a critical part. Other facets of learner autonomy evolved in his trajectory, e.g. collaborative autonomy, multi-resources user, and better manager, would not have been made possible without the optimal learning conditions he was exposed to. This finding suggests that instructors are instrumental in the formation of learner autonomy. Teachers need to create a learning environment/condition which is conducive to autonomous learning and where learners can excise their agency in learning, which should become a major target in a course design (Ribbe & Bezanilla, 2013).

Whilst this study may shed some light on the dynamism in learner autonomy, findings from a single case make a wider application difficult. Future studies could examine a larger sample size accompanied by a triangulation of data. Additionally, this study suggests that the learner exercised more autonomy owing to the course structure and task design. Future studies could investigate this further by comparing the effectiveness of different learning tasks on the formation of other dimensions of learner autonomy.

Notes on the contributor

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