An Investigation of Autonomous English Learners' Personal Learning Environments

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Abstract

Learning autonomy is important for the learning process in the 21st century, not because of the exponential rate of technological advancement, but because it is about freedom of choice that is supportive to the learning process. This study focuses on learning autonomy in the sense of learners' ability to plan and control their own learning process. The process also includes the ability to re-plan and try again in case of failure. This helps shed some light on the fact that the learning process does not consist of a set of fixed steps, and that it is dynamic and adjustable because of uncertainty. The program, MacroSIM, was created in a virtual world as a language learning environment for an ESP course at tertiary level. Its design is underpinned by constructivist concepts and reduces irrelevant factors to the language learning. This article presents only qualitative findings which were analyzed from all participants' diaries of the experimental group. The findings show that they could improve the structure of their learning process systematically after ten weeks of learning through the MacroSIM program. The investigation concludes with a model of self-driven language learning of 39 participants as language autonomous learners.

Keywords: learning autonomy, constructivist learning environment, technology in language teaching, learning paradigm, macrosimulation

Introduction

The low performance in English proficiency of Thai students has received a great deal of interest for many years and there are many scholars who have been studying this issue. Teaching methods in the Thai education system, including English teaching, are teacher-dominated so students have little chance to have control over their own learning. Classroom environments are text-based, and the teacher is the one who is meant to transfer information and students process it passively as data. Thus, this learning environment hinders students' self-control and trains students to rely on others. It means that students are trained to be heteronomous instead of autonomous learners who are responsible on their own learning process. In addition, this teaching approach is considered to be a teaching paradigm that favors rote memorization rather than critical thinking. Rote learning methods are one of many factors that cause problems in the teaching of English in Thailand (Punthumasen, 2007). Other factors are described in Punthumasen's study. They are: decontextualized learning environments, lack of authentic learning resources, and insufficient supportive technology for learning (Punthumasen, 2007). These factors indicate that there are two main reasons for Thai students' failure to learn English. They are the use of learning environments that do not support the learning process and students' lack of opportunity to use English in real contexts.

The objective of the study in this topic is to explore personal learning environments of autonomous language learners who, for a period of ten weeks,

experienced learning English through the use of MacroSIM. It is a quasi-experimental study which was conducted with two groups of participants; a control and an experimental group. These two groups enrolled in an ESP course in a Thai university. Due to space limitations, the focus of this paper presents only the results from the investigation of personal learning environments of participants in the experimental group who used the MacroSIM program. The research question that was formulated for studying about this topic is 'what are some of characteristics of individual virtual learning environments as perceived by the learners?'.

Background of the Study

One important aspect of knowledge construction is about interaction between self and environment. The intervention of this study was developed within this learning paradigm to create a language learning environment by using a simulation approach with technological assistance. The program is called MacroSIM and applied macrosimulation (Lian & Mestre, 1985) in a virtual world. Macrosimulation is a long-term collaborative activity for language learning in a simulated context that helps stimulating all learners to think and use English based on their own knowledge in realistic situations (Lian & Mestre, 1985). There were four tasks that all participants were required to simulate as four roles: customer, waiter/waitress, chef, and manager. Task works are helpful to language learning as Richards and Rogers (2014) described that they give 'a better context for the activation of learning process than form-focused activities, and hence ultimately provides better opportunities for language learning to take place'. The focus of MacroSIM was on enhancing the role of the learner by diminishing the role of the teacher. There were no learning objectives set beforehand. That means all learning

goals were determined by the participants themselves. Their use of English happened naturally according to their interest because there was no textbook used in class. The main objective of the program was about encouraging all participants to have direct experience in actually performing which would help them to interpret meanings more properly than studying English from scripted texts. This process is also consistent with Singhasiri and Thepsiri (2015) who suggested that task is 'considered as a language learning activity with non-instructional purposes'.

Jean Piaget viewed students in learning as active individuals and education should develop students on the basis of intellectual and moral autonomy. Piaget's approach in developing autonomy is about preventing students from thinking and acting heteronomously and he recommended that rewards and punishment influence heteronomous behavior (Kamii, 1984). The way to help developing learners to be less heteronomous means that they are encouraged to be more autonomous. These constructivist notions were applied to create a language learning environment in this study to support a learning process where students could control their own learning journeys. Piaget's methods also emphasize encouraging learners to consider other viewpoints. He expressed that learning environments in traditional schools are quite restrictive on this point because of the testing and grading systems (Piaget, 1973). Thus, the MacroSIM program was designed to have fewer conditions that are not favorable to learning autonomy (e.g. no testing and grading procedures). It also helped creating a collaborative learning environment as all participants were free to consult with their friends which made them feel less competitive with, but more support each other. Moreover, the teacher's role was not for instructing students but to offer assistance by facilitating access to learning resources. With the supportive advancement of technology, the MacroSIM program was implemented in a virtual

world and that helped reduce two important learning barriers: place and time. This gave more opportunities to the participants to experience using English with foreigners. It was really useful in helping to configure their language skill more suitably with the simulated situations.

Research Methodology

The study was quasi-experimental with mixed-method design and integrated qualitative and quantitative approaches. The study was conducted with two groups of participants from two intact classes as an experimental and a control group. The convenience sampling method was employed and the experimental group consisted of 39 students and the control group consisted of 23 students. They enrolled in an ESP course 'English for Restaurant and Catering Services' for the 2nd semester of academic year 2016. The researcher was the teacher of the experimental group. This group learned English through the MacroSIM program for 10 weeks of three 50-minute periods. The control group was with another teacher who taught the course as usual by using a textbook, assigning homework, and having exams.

Research Instruments

There were five research instruments in the study. However, this article focuses on qualitative findings of the investigation of personal learning environments of learners who were autonomously learning English through the MacroSIM program. Therefore, there was only one research instrument; a diary, that was used to interpret data for this topic. The participants were allowed to write in Thai about anything they wanted to express their ideas of learning English through MacroSIM. The MacroSIM program was introduced to all participants in the experimental group as a tool for learning English for this course. It was implemented in a virtual world

using the IMVU website (IMVU, 2016). All participants had to register as members of the virtual world to get an avatar and downloaded an application for accessing this 3D virtual world. In this virtual world all members communicate through a chat box at the bottom of the display by typing and clicking <enter>; then, their texts appear in a bubble on the screen.

Figure 2: A scene from IMVU virtual world of the experimental group

All 39 participants in the experimental group were required to perform 4 simulation roles as customer, waiter/waitress, chef, and manager as described below.

Table 1

Roles and assigned actions in MacroSIM

Roles	Assigned Actions
Customer	● Simulate beinga restaurant customer in any restaurant in IMVU for one hour.
Waiter/Waitress	● Apply for an available position as a waiter or waitress for three restaurants. ● Simulate being a waiter or waitresses for one hour.
Chef	● Apply for an available position as a chef for three restaurants. ● Simulate being a waiter or waitress for one hour.
Restaurant Manager	● Create an announcement for a job vacancy for two positions; waiter/waitress and chef for your restaurant by posting in Facebook Group. ● Simulate being a restaurant manager for one hour to interview three job applicants for recruiting.

They had to simulate each role for one hour and there were no fixed steps for doing the simulation. They could use their time for studying, preparing, or observing their friends and performed the task whenever they felt ready. At the end of each period they had to submit video clips of their simulated roles for checking and counting by the researcher. There was one rule that they needed to follow as every simulation was required to do in class only to be sure that all performances had done by each participant themselves.

Data Analysis

The qualitative method was applied to investigate relationship between variables of the study. This method is very useful for interpreting data that are complex and subjective as the study focused on human behavior. There were several qualitative techniques used in analyzing the data such as content analysis was used with all data from diaries of all 39 participants of the experimental group. They all were analyzed by grouping, coding, and categorizing to interpret the results. It was found that the participants wrote their diaries 2-6 entries with the total number of 15,681 words. Altogether, there were 138 entries and the average was 3.54 entries. The longest entry had 669 words which was three pages long. Data coding was repeated twice in 2 different periods (Time 1 and Time 2) for intra-rater reliability as Mackey & Gass (2005) suggest for qualitative data analyzing.

Investigating the Personal Learning Environments

According to the research question 'What are some of the characteristics of individual virtual learning environments as perceived by the learners?', all diaries from 39 participants of the experimental group were analyzed to answer this research question. All recordings could be grouped into three periods of time when they participated in MacroSIM. They were before, during, and after using the program. Then, all comments were categorized as 4 groups which were Self-Planning, Self-Awareness Raising, Self-Evaluating, and Replanning and Conceptualizing. The next section provides 4 tables of the findings as quantitative results and ends with qualitative data as supporting evidence.

Results

Table 2

Before using MacroSIM: Self-planning

Self-Planning	Frequency
1) Preparing	**2**
• Taking note	1
• Preparing dialogue	1
2) Finding and studying information	**42**
• Vocabulary	14
• Content	13
• Conversation	6
• Sentence	4
• Topic	2
• Text from previous course	2
• Sample expression	1
3) Accessing	**38**
• Application	13
• Google	10
• Website	7
• YouTube	7
• Facebook	1
4) Consulting	**19**
• Friends	17
• Teacher	2
Total	**101 comments**

There were 101 comments found in this step as they mentioned about their preparation process before taking a role in the simulation. This step, Self-Planning, could be divided into 4 subgroups such as preparing, finding and studying information, accessing, and consulting. The first subgroup is about preparation process which was found only 2 comments that said directly. The second subgroup, finding and studying information, had the highest frequency with 42 comments. It shows that participants were concerned most about knowledge of vocabulary used in restaurant context, then content was the second. The next most frequent comment was about how to access these sources of information. Using an application in mobile phone was mentioned most. The last comment is about having consultation and they mentioned that they talked to their friends more often than their teacher.

Table 3

During using MacroSIM: Self-awareness raising

Self-Awareness Raising	**Frequency**
1) Simulation helps developing language skill	9
2) Real situation is important in developing understanding	7
3) Linking to their prior knowledge	6
4) Context tells something	5
5) Increasing adaptability skill	5
Total	**32 comments**

While having conversations in MacroSIM, some participants mentioned their use of English in the virtual world. There are 5 subgroups and 9 participants expressed that learning English through a simulation approach helped improve their language skills. There were 7 participants said that real situations helped them

develop understandings about the language. These comments were coded as 'Self-Awareness Raising' which reflected the fact that MacroSIM helped to increase a sense of awareness in using English among these participants.

Table 4

After using MacroSIM: Self-evaluating and replanning

Self-Evaluating	**Frequency**
1) Evaluating the language use in reality	**51**
• Vocabulary	20
• Structure and grammar knowledge	14
• Abbreviation	8
• Idiom/slang/informal language	5
• Misspelling	4
2) Replanning to improve	**35**
Total	**86 comments**

After performing a role, participants always mentioned their use of English. They wrote about their experience and commented that using English in the real situation was different from what they expected. This step is divided for two subgroups; evaluating the language use in reality and replanning to improve. The highest frequency is the comment about self-evaluating, and the vocabulary skill was the most frequent issue they mentioned. Then, the second concern is about their knowledge of structure and grammatical form. The second subgroup is about replanning to improve, there were 35 comments found where they explicitly stated that they 'must improve' their language ability by studying more about their mistakes.

Table 5

Conceptualizing

Conceptualizing	**Frequency**
1) Language use in reality	11
2) Awareness of unpredictable situations	5
3) Learning process	2
Total	**18 comments**

At the end of each entry, some participants drew a conclusion based on their own idea about their experience of doing the simulation in MacroSIM. The table above presents three groups of comments which could be inferred as being their conceptualization of learning English through the MacroSIM program. These three groups are language use in reality, awareness of unpredictable situations, and learning process. Some participants' comments are presented below as examples.

1) Language use in reality

1. *Foreigners usually use informal language which is difficult to understand but if I don't get it I'll ask them directly. At first, I thought that I must use the language with correct grammar but in reality, try to communicate the meaning is just fine. (Participant number 14)*

2. *Sometimes, my interlocutor used 'Pl' and 'Thx' which I don't understand, and I've never used it before. So, I got confused and cannot continue the conversation. (Participant number 17)*

2) Awareness of unpredictable situations

1. I found that it's challenging when I changed the role from customer to be a waitress; I didn't know what food customer will order or what kind of service that they will ask for. (Participant number 25)

2. In the simulation of a job interview, I could sense that in the actual setting of an interview I cannot know what questions will be asked. (Participant number 38)

3) Learning process

1. Self-directed learning helps us gain more knowledge that we can develop further. It is similar to this course which helps us improving communication skill a lot. (Participant number 35, 2nd entry)

2. There are various types of learning, reading books, watching movies, and listening to music are all self-studying. Including playing games, we can learn something from it too. (Participant number 35, 3rd entry)

Discussion

Self-Driven Learning Model of Autonomous Language Learners

This section discusses the qualitative results of personal learning environments of the experimental group who experienced learning English through MacroSIM program. Below is a model of the English learning process which emerged as a self-driven learning pattern according to the results of the content analysis of all comments in the diaries. All these four steps happened without any instruction from the teacher. Therefore, it demonstrates that participants of the experimental group had a learning system to direct themselves to learn English in restaurant context within 10 weeks.

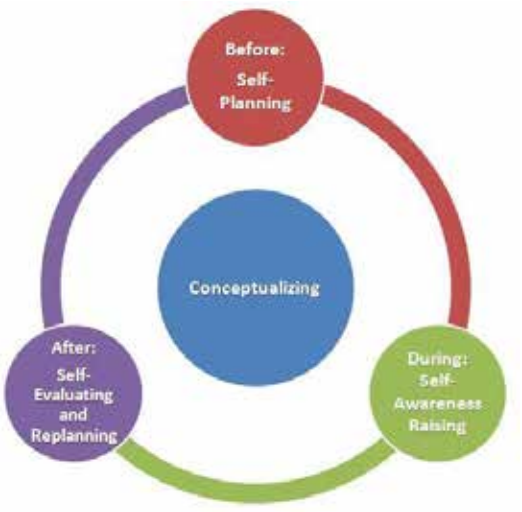

Figure 3: Self-driven learning model of autonomous language learners

These four steps start with Self-Planning which implies that all of them were able to generate language learning lessons according to their own interest to prepare themselves to do the task. They knew how to find information by accessing several human and non-human resources to acquire information that they wanted to know. Then, the second step is Self-Awareness Raising which shows that they were aware of all language processing; both expressing and receiving, which means that they had tried to understand everything thoroughly. The last step is Self-Evaluating combined with Replanning; this step illustrates that the participants had a sense of self-judging on their own language production. They observed their own use of English which means that they were mindful and aware of making mistakes. When they found that they had been mistaken in using the language; they made a commitment to themselves to study more about those mistakes. This shows that they were mindful and intended to develop themselves to be better. Moreover, the results also revealed that some participants had a

step of Conceptualization as they crystallized some concepts after learning English through the program. Although, the implementation lasted for only 10 weeks this emerging pattern points out that some of them could negate their past experience which was contradict to the reality.

This model is exemplified as a self-directed learning process of autonomous language learners in tertiary level. It is similar to the results of Sugata Mitra's experiment with Indian children who learned to use computer without any instruction given. He concluded that '6 – 13 years old children are able to self-instruct and teach their peers without intervention from adults' (Mitra, 2007; Iamdar and Kulkarni, 2007; Farris, 2013). This also happened in the MacroSIM project as the role of the teacher was diminished. Most of the time, the participants in the experimental group did their tasks independently. The qualitative results also identified that they consulted with their friends (17 comments) more often than the teacher (2 comments).

The findings also correspond to Lian's suggestion of three elements that can develop meaning-making mechanism. He suggested that these three elements, the 3Cs: confront, contrast, and contest, can help developing student's understandings of what they are learning (Lian, 2000; Lian, 2001; Lian, 2004; Lian & Sangarun, 2017). On top of that, the findings are also consistent with an expression of a futurist, Alvin Toffler, who said that 'The illiterate of the 21stcentury will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn' (Toffler, 1981). It could be inferred from this that MacroSIM was effective in helping the participants of the experimental group to improve their learning process not only to be autonomous, but to function systematically.

Pedagogical Implications

The MacroSIM program is designed with constructivist concept in order to enhance learning autonomy by reducing the roles of teacher. That means participants were given more opportunities to rely on themselves in learning English. This conforms to the notion of child-centered approach as learners are the ones who actively make sense of things that they are learning. In pedagogical implications children should be taught to be active and responsible for their own learning process.It is opposite to traditional teaching practices; where learners sit quietly in a classroom waiting to be fulfilled with information from a teacher. Therefore, to develop English teaching practices in the Thai education system teachers should focus more on learning paradigm and be aware of practicing traditional teaching style. Here are some suggestions for increasing a degree of autonomy in learning by reducing teaching practices which influence heteronomous behaviors.

1. Lecturing is one-way communication which is considered as teaching paradigm and it should be reduced in order to promote critical thinking by having two-way communication. Discussion is a teaching approach that helps to develop learners' understanding through deep discussion.

2. Learning by doing is another approach in the constructivist concept. Learners could develop their understanding through using that knowledge instead of remembering it as content. The more they practice the more they understand.

3. Thinking, pondering, and planning take time, and these steps are important for the learning process. Learners have more self-confidence to do things when they are ready. They feel stressed when they are forced to do things that they are uncertain and it can stop their learning process.

4. Evaluation should be used for improving learners' performance instead of punishing or rewarding. As Piaget mentioned, rewards and punishments stimulate heteronomous behaviors.

5. Grading and testing systems sometimes discourage productivity improvement but cooperative learning environments are useful for promoting the learning process.

6. Freedom of learning is important to learning autonomy, learners should have freedom to think and make decision on their own actions. It promotes the sense of ownership of their learning process which means that they are responsible for their own learning.

Recommendations

The contribution of this paper is the results of learning autonomy in the sense of learning paradigm which are rarely seen in Thai studies. Based on the findings of this topic, it was found that participants in the experimental group were more self-control, more autonomous, and more mindful of their learning journey. They were aware of making mistakes and intentionally find a way to improve themselves and that show effectiveness of the MacroSIM program. Moreover, the model of self-driven language learning also clearly shows that those participants in the experimental group could improve their structure of language learning process to be more systematic. For further study, it is really interesting and worth to investigate how learners apply their sense of autonomy in other courses.

The limitations of this research for those researchers who might be interested to conduct similar study; the researcher has the following suggestions.

1. The sample of the study was 3rd year students from a Thai university. Their English skill might not be representative of that of students from other countries, curricula or levels.

2. The data was collected from unstructured diaries as a research instrument. However, the duration of the experiment was only 10 weeks of three 50-minutes period. Therefore, the implementation was restrictive to the data collection. A further study might be conducted with a longer period of time of the experiment.

3. This current study was conducted in a virtual world which required language use in text chat based from computer-mediated communications (CMC). The study results might not be generalized to the use of other English skills.

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