

The Effects of Flipped Classroom on Learners' Autonomy: A Case Study in a Vietnam University

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Abstract: This study aims to explore the relationship between the flipped classroom, nowadays a widely used teaching method in various educational settings, and learner autonomy in English language classrooms. To fulfill the research objectives, the study adopts the qualitative method approach using action research carried out in six Business English classes at Thuongmai University and in-depth interviews with six teachers in the form of focus groups and 20 students in individual interviews. Research findings indicate that by flipping the learning procedure, asking students to approach knowledge on their own by studying videos and referring to learning material before attending classes, the flipped model contributes to raising all the five levels in the autonomy model suggested by Nunan (1997), which are awareness, involvement, intervention, creation and transcendence. Therefore, this teaching method should be promoted to improve learner autonomy, which is believed to enhance English proficiency. Some implications have been highlighted to teachers, students and education administrators so that this method can be applied more effectively in English language classrooms.

Keywords: Flipped classroom, learner autonomy, English language classrooms, English proficiency.

Subject classification: Educational science.

1. Introduction

Today's educational environment has changed the way teachers and students approach the teaching and learning process. To gain better academic performance, students are expected to be more active in class, internalizing content through many different classroom tasks (Crouch & Mazur, 2001). Blended and inquiry-based

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learning, and other educational approaches that integrate flexible, efficient learners and encourage them to take responsibility for their own learning are therefore more commonly applied nowadays (Johnson, Becker, Estrada and Freeman, 2014). Out of the various techniques in these educational approaches, the flipped classroom (also called flipped learning) has become increasingly popular in educational institutions worldwide as it helps to improve students' learning performance (Baepler, Walker & Driessen, 2014; Sun & Wu, 2016; Talley & Scherer, 2013), demonstrate better learning outcomes (Chen Hsieh, Wu, & Marek, 2017; Kong, 2014; Smallhorn, 2017) and increase motivation (Smallhorn, 2017; Yilmaz, 2017).

Learner autonomy has become an important focus and an ultimate goal in education practices. As a research topic, it has drawn great attention from scholars in the past few decades. Learner autonomy is defined as the ability of learners to take charge of their own learning (Holec, 1981) and it is believed it helps improve their motivation, enhance their language learning efficiency, and prepare them for long-long learning (Nguyen, Tangen & Beutel, 2014). For its significance in education in general and language teaching in particular, the question 'how to increase learner autonomy?' is one that educators always seek to answer.

This study aims to investigate the use of the flipped classroom in English language classrooms to see if the method helps raise learner autonomy, and provide some implications on the use of this teaching method in order to improve learner autonomy with a view to enhancing English proficiency.

2. Literature review

2.1. Flipped classrooms

2.1.1. Definitions of flipped classrooms

The term *flipped classroom* was first introduced in 2007 when two secondary school teachers - Bergmann and Sams - recorded their chemistry lectures which they shared with students who had not attended all the classes. Students watched the videos and saw what they would otherwise have been taught in the classroom, so that the time in class could be used for discussion and knowledge development. The new method quickly received the attention of teachers and educators and was applied widely to other subjects. Since then, the flipped classroom has become a popular research topic.

According to Bergmann and Sams (2012), the flipped classroom is a pedagogical model where learners access predetermined digital resources through a platform outside the classroom environment before they come to class. The class time is therefore devoted to collaborative and interactive problem-solving activities and consolidation practices. Bishop and Verleger (2013) define the flipped

classroom as a teaching method composed of two main aspects: (1) the use of computers such as showing videos of lectures in the pre-class phase, and (2) the involvement of interactive activities during-class time. Pohl, Bouchachia and Hellwagner (2018) provide a more general description of the flipped classroom as a teaching-learning model where the traditional lecture format is flipped so that learners study material at home to gain knowledge and information related to the lesson before to going to class, while the class time is used for collaborative activities like problem-solving peer-to-peer discussions, case studies, or presentations.

2.1.2. Impacts of the flipped classroom

The flipped classroom teaching model is usually compared with the traditional classroom format to highlight its distinctive features. In terms of teaching objectives, while the traditional classroom focuses on the subject knowledge that is realized via classroom information transmission, in the flipped model, the emphasis is placed on students' learning ability which is carried out via information transfer before class. Regarding the class content, in the traditional classroom setting, knowledge is delivered to students via teachers' explanation and infusion teaching; by contrast, in flipped classrooms, students gain knowledge by watching videos to work out the answers to questions. As for the teaching process and evaluation, in the traditional classroom, it is based on the teacher teaching and students learning, while evaluation is based on the academic performance of the students. In the flipped classroom, it is the self-directed learning process where students find problems and think of the solutions, and evaluation focuses on the learning processes rather than the final results (Li, Zhang & Hu, 2018).

Most research agrees that the flipped model exerts positive impacts on students' learning via enhancing learner motivation (Wiginton, 2013; Smallhorn, 2017; Yilmaz, 2017), encouraging engagement (Baepler, Walker & Driessen, 2014), raising autonomy in the learning process (Wiginton, 2013; Smallhorn, 2017), and increasing learning performance (Baepler, Walker & Driessen, 2014), which contributes to students' better learning outcomes (Kong, 2014; Smallhorn, 2017). At the same time, it should be noted that a few studies also suggest that the impacts are not significantly positive, such as the research by Smallhorn (2017) and Cabi (2018) who suggest that the use of the flipped classroom model does not increase students' academic achievement. However, the number of studies which advocate the benefits of the flipped model is far higher than those which reject the positive influences.

2.2. *Learner autonomy*

2.2.1. Definitions of learner autonomy

Learner autonomy has been a popular research topic among scholars. It has been mistakenly synonymized with “self-instruction”, “self-access”, “self-study”, “out-of-class learning” or distance learning; however, researchers now agree that they are not synonyms as these terms basically refer to the ways of learning and degrees of learners while learner autonomy is generally related to their capabilities in, and attitudes towards, learning activities (Benson, 2001).

According to Holec (1981), learner autonomy is the ability of learners to take charge of their own learning, which is reflected in their responsibilities for determining the objectives, content, and progress of learning, deciding on the learning methods and techniques, monitoring the procedures of acquisition, and evaluating what they have acquired. Sharing this view, Benson (2001) describes learner autonomy as the capacity to take control of one’s own learning and points out three levels to exercise learner control, i.e., control over learning management, control over cognitive process, and control over learning content.

Regarding the features of learner autonomy, based on literature review, Dang (2012) concludes that learner autonomy is reflected via some characteristics of autonomous learners. Accordingly, an autonomous learner can identify how to learn, control their learning activities, learn without the involvement of teachers, make and implement choices, implement rational decision-making over learning activities, and give responses beyond usual instructions.

2.2.2. Impacts of learner autonomy

There is a lot of consensus among researchers that learner autonomy has a positive impact on learning outcomes. Autonomous learners are often conscious, democratic, and can think critically, so they can determine their own goals and have determination to take actions to reach those goals (Littlewood, 1999). Little (2007) agrees that learner autonomy is related to better academic achievements and presents three reasons why autonomous learners often learn more effectively. *Firstly*, an autonomous learner is strongly motivated to meet his/her learning needs; *secondly*, an autonomous learner is more likely to try different methods of learning to study more effectively; and *finally*, as it is impossible for learners to develop all the necessary skills inside the classroom, an autonomous learner has more opportunities to develop their communication skills than the others.

Researchers are particularly interested in the relationships between learner autonomy and language proficiency. They propose that learner autonomy contributes to learners’ better language proficiency (Ablard & Lipschultz, 1998; Zimmerman & Risenberg, 1992) as high-achieving students can find and apply different autonomous strategies and actively find other sources of information to boost their language acquisition. More importantly, learner autonomy is believed to enhance motivation and prepare students for life-long learning, as they gradually form a habit of, and eagerness for, learning new things and adopt the right strategies

to learn independently.

Notably, in his recent quantitative research on the effects of learner autonomy on the English proficiency of Vietnamese non-English language major learners, upon reaffirming the positive impacts of learner autonomy on their overall English proficiency and academic achievements, Ho Si Thang Kiet (2018) specifies that while there are positive and significant correlations between learner autonomy and language proficiency of proficient learners, such correlations do not exist among those with low proficiency.

2.2.3. Attributes of learner autonomy

According to Nunan (1997), learner autonomy is constructed from five attributes representing the five levels of development. They are a sequential series of behavioral and cognitive actions that students absorb during each stage in the learning process to develop their autonomy, as presented in Table 1.

Table 1: Five-level model of learner autonomy

| Level | Learner action | Content | Process |
|-------|----------------|--|---|
| 1 | Awareness | Learners are made aware of the pedagogical goals and content of the materials they are using. | Learners identify strategy implications of pedagogical tasks and identify their own preferred learning styles/strategies. |
| 2 | Involvement | Learners are involved in selecting their own goals from a range of alternatives on offer. | Learners make choices among a range of options |
| 3 | Intervention | Learners are involved in modifying and adapting the goals and contents of the learning program. | Learners modify/adapt tasks. |
| 4 | Creation | Learners create their own goals and objectives. | Learners create their own tasks |
| 5 | Transcendence | Learners go beyond the classroom and make links between the content of classroom learning and the world. | Learners become teachers and researchers. |

Source: (Nunan, 1997: 195)

As illustrated in the table, the first level of learner autonomy is *awareness*, where learners know what the learning goals are and prepare strategies. In the second level of *involvement*, they adopt their learning goals and choose appropriate tasks. Next, they come to the *intervention* level, where they modify the goals and tasks. The next level is *creation*, in which learners devise their own goals and design their own tasks to be fulfilled. The top level in the learning process is *transcendence*, where learners go beyond the classroom, by researching and accumulating knowledge independently.

3. Materials and methods

3.1. Research questions

The study aims to investigate the impact of the flipped classroom model on learner autonomy in English language classes. In particular, it seeks to answer the following two questions: (1) *Does the flipped classroom have a positive impact on learner autonomy in English language classrooms?* And, if the flipped classroom is proved to enhance learner autonomy then (2) *How can the flipped classroom be used to raise the learner autonomy in English language classrooms?*

3.2. Research tools, participants and sites

The study adopts the qualitative method, carried out as action research collecting opinions of the participants via in-depth interviews.

3.1.1. Research sites and participants

The action research was carried out at Thuongmai University where the researchers work as EFL teachers. The flipped classroom model was applied in six Business English classes taught by the two researchers and four other teachers in the English Faculty.

Business English is a subject delivered to third-year students majoring in Marketing Management, Sales Management and Distribution Channel Management in three joint-training programs with French universities. It is a subject lasting 20 hours made up of seven lessons, held once a week over seven weeks. Business English is structured as an EMI ((English as the medium of instruction) subject, where students are expected to gain basic knowledge of marketing using English as the medium of instruction.

There are 257 students in the six chosen Business English classes. The level of English is upper-intermediate, and at least level four in the six-level Foreign Language Proficiency Framework for Vietnam is needed to be eligible for

admission to the third year. Before entering the third year, students complete four general English modules with eight credits each, making a total of 32 credits, equivalent to 480 periods or 24,000 hours; thus, they acquire quite a good English background which enables them to follow majored lessons in the English language. They have also done training in various learning skills such as teamwork, presentation, communication, computer literacy, etc. to prepare themselves to study major subjects delivered by foreign teachers from partner universities.

The six teachers (including the two researchers) participating in the study are all senior teachers with 17 to 28 years' teaching experience, with a masters' degree (four teachers) and a doctors degree (two teachers), having taught the subject for eight to 12 years. They were all informed of the research objectives and guided on how to organize the flipped classroom model, based on the recorded lessons prepared in advance by the researchers. They were asked to observe and take notes of students' behavior for comment on students' learning autonomy afterwards. The research period was over three months, from August to October 2024.

3.1.2. Research tools and data collection procedures

The study adopts the qualitative research approach, using action research to implement the flipped model in the classrooms and in-depth interviews to gain the teachers' and students' insights into the impact of the flipped classroom method on learner autonomy and what some difficulties are with this method.

The action research was carried out in six classes with a total of 257 students taught by the two researchers and four additional teachers. On the first day of the course, students were instructed on how the class would run as it was quite a new way of class organization. They were then given the recorded lessons and reading material one week before classes took place so that they could watch the videos and read the handouts to assimilate the knowledge before going to class. Class time was used for the students to present the knowledge that they had gained from self-study and for teachers to organize interactive activities such as group discussions and projects.

To investigate how the flipped model affects learner autonomy and what difficulties teachers and students face when applying this method, in-depth interviews were conducted with those who participated in the flipped classes. The questions related to the impacts of the flipped class method designed on the five levels of learner autonomy proposed by Nunan (1997).

The interviews with the teachers were carried out in the form of focus groups - each group consisting of three people, including one of the two researchers acting as the moderator. The aim of the focus groups was to collect the teachers' multi-faceted opinions to explore their views from different angles as it was expected they may interact and discuss with each other when answering questions. Regarding the students, the interviews were organized individually with 20 students

as it was not convenient to group them together. The interviews were conducted in Vietnamese, the answers were transcribed and coded to make it convenient for data presentation in the research findings. The code for teachers are T01 to T06 and for students, S01 to S20.

4. Results and discussions

4.1. Research findings

The findings are presented in accordance with the two research questions in section 3.1. Most of the participants' answers are included as direct quotes to retain their "feel".

4.1.1. Impacts of flipped classrooms on learner autonomy

Participants in the survey mostly agreed that the flipped classroom model is a good teaching method for raising learner autonomy in their English language class.

In the teachers' opinion, the method gradually makes students become active and responsible in their study as they are made aware of the learning goals and the content of the material that they are expected to acquire. The entire course facilitates the students to work out learning strategies they need to take to carry out the tasks given to them by the teacher. *"In the first lesson, I explained the procedures to my students. I guided them on tasks they needed to do before the class and described what would happen in the class time. When students were clear about what to do, they had a better plan for their self-study"* (T02).

Teachers in the focus groups also shared that the flipped model involves students in the learning process. Unlike the traditional teaching method where teachers present knowledge in a one-way delivery format and students passively absorb, in the flipped classroom, students *"are more likely to get involved in the before-class and during-class activities"* (T04) because they quickly realize that without preparing for lessons in advance, they may fall behind. As one teacher shared, *"at first, some students did not follow the procedure. They did not watch the videos nor read the handouts before coming to class. They stuck to their traditional learning style. Then they couldn't answer the questions when the teacher asked them to present what they had read at home"* (T03). Students also agree that the flipped model makes them more involved in the learning process as they *"didn't have any idea what other classmates were talking about if they had not completed the assigned tasks before class"* (S06) and *"cannot keep up with other friends in group discussions when other members seem to understand the key points and could present their ideas confidently"* (S09).

Both teachers and students in the interview agreed that the flipped classroom

model facilitates students' intervention in a way to make them become more active in modifying and adapting how to carry out their assigned tasks to match the learning goals. Students shared that in the flipped model, they are *"free to decide on the way to absorb the knowledge"* (S12), rather than doing what the teachers ask them to do, as per the traditional teaching method, so they *"feel more motivated and become more enthusiastic about the learning activities"* (S16).

Regarding the creation level, it is considered that by being allowed to accumulate knowledge independently by watching videos and reading material, students can even create their own way of doing things that are suitable with their learning style, objectives, and personal characteristics. Sharing about this matter, one teacher clarified that learning by watching the recorded lessons means students can study in a way that is suitable for them. They are *"not bound by any pre-determined rules or manners. They create their own goals and activities to learn the knowledge"* (T01). One student expressed her view that *"for me, the biggest trouble was the vocabulary. There were so many terminologies in the handouts so when I read before class, I could hardly understand the main points. I needed to refer to the handouts of the marketing subject in Vietnamese, read them again and based on these handouts to work out the main ideas in the handouts. It took time, but at least I could make it"* (S15).

As for the highest level, transcendence, teachers believe that with active learners, the flipped model encourages them to work like researchers as they can *"actively find the information and knowledge from various sources rather than stick to what they are provided like they often do in the traditional learning model"* (T01) and they can *"confidently present what they have found to the class as if they were a teacher"* (T06). Students added that by reporting and discussing what they had prepared before the class, they became *"more mature and skilled in research, which is very useful for their future careers and further study"* (S18). However, teachers also point out that the majority of students cannot totally reach this level, only *"working towards being a researcher"* but they agreed that *"just the fact that students are becoming independent researchers in their study is satisfactory"* (T05).

From what the participating teachers and students shared, it can be seen that the flipped classroom model, where students study the information before the class, helps generate their awareness and involvement, facilitates their intervention and creation, and develops their transcendence. These are the underlying factors of increasing their autonomy, which is believed to contribute to their language proficiency.

4.1.2. How to use the flipped classroom to raise learner autonomy

As the flipped classroom can help improve learner autonomy, the important question is how to use the model effectively in English language classrooms. The

teachers and students participating in the interviews shared their thoughts on some of the difficulties they face when the flipped classroom is applied as well as how they think the method can be applied to improve learner autonomy.

The biggest challenge is that students, and sometimes even teachers, are still unfamiliar with its implementation. While both groups are accustomed to the traditional teaching method where teachers deliver lectures and students absorb the information, the flipped classroom reverses this with students actively assimilating the content before class. They have to decide on their own method of learning, including when and how much time they spend, what they should pay particular attention to, etc. This causes students some confusion as they *“do not know what to do”* (S06) or *“feel quite disoriented”* (S17) because *“some students are not equipped with the appropriate skills to work independently”* (T04). Teachers also face some difficulties, particularly related to *“how to make sure that students spend time learning the materials before going to school”* (T02) and *“how to motivate students to be active in their preparation process”* (T06).

Another difficulty cited by students is that the flipped method only works if they really are independent and self-disciplined; one student shared, *“no one watches me while I am learning, so if I feel bored, I may turn to other entertaining stuff, like surfing the net or playing some games”* (S20). It is usually hard for students to stay focused, especially when they do not have a disciplined learning environment. One student expressed: *“I am easily distracted by external factors, like a message from my friend, or some pieces of music or videos I come across while learning”* (S04).

To help solve these problems, teachers believe that it is imperative that the teachers themselves change their own mindset about teaching and learning activities because *“teachers can only change their students’ attitude and learning habits when they change themselves”* (T06). Regarding how the class should be organized, it is necessary that they provide students with detailed instructions on how they are expected to do the tasks before class as *“once students are aware of their missions, they may get involved and are capable of creating their own activities to fulfill their tasks”* (T02).

From their perspective, regarding their expectations for assistance, the students participating in the interviews explained that they really hoped to get guidance on what to do and for help from their teachers *“during the process of preparing for the class activities, as sometimes although teachers have given detailed instructions, I still find it hard to deal with the tasks by myself”* (T16). Students also shared that pair work or group work would be of great help in the flipped process as it helps them to *“feel more confident”* (S20) in what they are doing. They also believe that by working in pairs or groups, they can *“discuss with each other how to do the tasks”* (S02) and *“rely on each other”* (S14) to tackle their assigned tasks more effectively as this learning method was still new to most of them.

4.2. Discussion and implications

Teachers and students participating in the interviews agreed that the flipped classroom can help to develop all five levels of learner autonomy in the autonomy model proposed by Nunan (1997), i.e., awareness, involvement, intervention, creation and transcendence. This illustrates that this method can help students become more self-sufficient in their learning process, which is believed to improve their English proficiency.

As the flipped method bears many distinct features different from the traditional method with which both teachers and students are familiar, students, and even teachers, have faced difficulties in its implementation; therefore, there should be considerations when applying this model to ensure its efficiency can be promoted.

Regarding the teachers, *firstly*, it is necessary that they change their attitudes towards their teaching activities and be prepared to adopt new blended teaching methods that put students in the center of the teaching process including the flipped classroom. Once teachers are aware of the benefits, they become more willing to do research on their applications so that they can implement them in line with the specific features of their teaching contexts and learners. *Secondly*, regarding the application of the flipped classroom model, as students are expected to watch videos and study the handouts before class, it is important for teachers to prepare the materials properly to facilitate students' self-access to the knowledge. A detailed set of instructions on how to use the materials should be designed and given to students which they can refer to whenever they need to ensure they know what to do during the preparation process. *Thirdly*, teachers should also offer learning incentives to their students such as giving bonus scores to those who completed their work adequately and effectively; however, if students don't do all the tasks then there may be some penalization, such as lowering students' grades. These incentives and penalties can motivate students to be more responsible and encourage their self-discipline, which contributes to forming their autonomy. *Finally*, teachers should also assign tasks to students in a flexible way, combining individual and team work so that students can help each other when preparing for the class activities, and thereby become more confident.

For students, they should understand that they are the center of the changes and hence play a decisive role in their own academic achievements. *First and foremost*, they should alter their attitudes towards their learning activities and identify that without becoming more active in their learning process, they won't see a difference. Changing their awareness would be the foundation for changing their action and to becoming more involved in the learning activities, hence to create their own tasks and goals and become their own teacher and researcher on their path to gaining knowledge. *Secondly*, students should be more active and willing to ask for help. As the flipped classroom is a new model, it is understandable there could be difficulties along the way, so consulting friends, teachers, and other resources

such as Google or ChatGPT, is really helpful in their self-study process.

Education administrators can also be of great help for applying this model effectively. *Firstly*, there should be general policies and strategies in place from the university leading boards on comprehensive amendments to training activities in order to establish and develop learner autonomy so that functional departments, faculties, and teachers have a better foundation and motivation to apply advanced teaching methods. *Secondly*, technological infrastructure should also be upgraded to create favorable conditions for students in their learning process in general and for the adoption of the flipped model in particular. *Finally*, there should be specialized training programs and seminars to update teachers in new teaching methods, for them to share and learn about teaching experiences, and to improve their skills, especially in technology literacy, to strengthen the foundations and become more confident making changes for the benefit of students.

5. Conclusion

Improving learner autonomy plays a pivotal role in language teaching as it is believed to better the language proficiency of learners. How to promote learner autonomy has therefore become an important task for teachers and education administrators. This study aims to find out if the flipped classroom model can have a positive impact on learner autonomy and, if so, how it should be used. The research findings indicate that the flipped model contributes to improving all five levels of autonomous development. In the flipped classroom, students approach knowledge on their own by studying videos and referring to learning materials before attending lessons, while the class time is devoted to interactive and collaborative activities between teachers and students, as well as among students themselves. Thus, the method is shown to raise learners' awareness, encourage their involvement, develop their intervention, foster their creativity, and facilitate their transcendence. Therefore, this teaching approach should be promoted. Based on the research findings, some implications have been proposed for teachers, students and education administrators to improve the efficiency of applying this method in English language classrooms.

Despite great efforts from the researchers, this study still has some limitations. *Firstly*, it is based solely on the qualitative approach to seek answers to research questions, which may make the findings somehow less reliable and less valid. *Secondly*, the research was conducted only in one university with a quite modest sample size in comparison with the total population, which may also affect the representativeness of the research sample. These limitations are suggestions for our future studies where a combination of qualitative and quantitative methods, as well as expanding the research setting and sample, could improve the reliability and validity of the research findings.

References

- Ablard, K. & Lipschultz, R. (1998). Self-regulated learning in high-achieving students: Relations to advanced reasoning, achievement goals, and gender. *Journal of Educational Psychology*, 90(2): 94-101.
- Baepler, P., Walker, J., & Driessen, M. (2014). It's not about seat time: Blending, flipping, and efficiency in active learning classrooms. *Computers & Education*, 78: 227-236. doi: 10.1016/j.compedu.2014.06.006
- Benson, P. (2001). *Teaching and researching autonomy in language learning*. London: Longman.
- Bergmann, J., & Sams, A. (2012). *Flip your classroom: Reach every student in every class every day*. Washington, DC: Internal Society for Technology in education.
- Bishop, J. L., & Verleger, M. A. (2013, June). The flipped classroom: A survey of the research. In: *ASEE national conference proceedings, Atlanta, GA*. 30(9): 1-18. http://www.asee.org/file_server/papers/attachment/file/0003/3259/6219.
- Cabi, E. (2018). The impact of the flipped classroom model on students' academic achievement. *International Review of Research in Open and Distributed Learning*, 19(3). <https://doi.org/10.19173/irrodl.v19i3.3482>.
- Chen Hsieh, J. S., Wu, W.C.V., & Marek, M.W. (2017). Using the flipped classroom to enhance EFL learning. *Computer Assisted Language Learning*, 30(1-2): 1-21. doi: 10.1080/09588221.2015.1111910.
- Crouch, C. H., & Mazur, E. (2001). Peer instruction: Ten years of experience and results. *American Journal of Physics*, 69(9): 970-977. doi: 10.1119/1.1374249.
- Holec, H. (1981). *Autonomy in foreign language learning*. Oxford: Pergamon.
- Ho Si Thang Kiet. (2018). Effects of learner autonomy on English proficiency of non-English major students. *Journal of Science and Technology*. The University of Da Nang, 133(12).
- Johnson, L., Becker, S., Estrada, V., & Freeman, A. (2014). *Horizon report: 2014 higher education*.
- Kong, S. C. (2014). Developing information literacy and critical thinking skills through domain knowledge learning in digital classrooms: An experience of practicing flipped classroom strategy. *Computers & Education*, 78: 160-173. doi: 10.1016/j.compedu.2014.05.009.
- Li, J., Zhang, X. & Hu, Z. (2018). The design and application of flip classroom teaching based on computer technology. *iJET*, 13(10). doi: <https://doi.org/10.3991/ijet.v13i10.9453>.
- Little, D. (2007). Language learner autonomy: Some fundamental considerations revisited. *Innovation in language learning and teaching*, 1(1):14-29. <https://doi.org/10.2167/illt040.0>.
- Littlewood, W. (1999). Defining and developing autonomy in East Asian contexts. *Applied Linguistics*, 20(1):71-94.
- Nguyen, N.T., Tangen, D. & Beutel, D. (2014). Exploring the concept of learner autonomy in cross-cultural research. *Studies in Self-access Learning Journal*, 5(3): 202-216.
- Nunan, D. (1997). Designing and adapting materials to encourage learner autonomy. In: P. Benson

& P. Voller (Eds.). *Autonomy and independence in language learning*:192 - 203. Harlow: Longman.

Pohl, D., Bouchachia, A., & Hellwagner, H. (2018). Batch-based active learning: Application to social media data for crisis management. *Expert Systems with Applications*, 93: 232-244. <https://doi.org/10.1016/j.eswa.2017.10.026>.

Smallhorn, M. (2017). The flipped classroom: A learning model to increase student engagement not academic achievement. *Student Success*, 8(2). doi: 10.5204/ssj.v8i2.381

Sun, J. C. Y., & Wu, Y. T. (2016). Analysis of learning achievement and teacher–student interactions in flipped and conventional classrooms. *The International Review of Research in Open and Distributed Learning*, 17(1). doi: 10.19173/irrodl.v17i1.2116.

Talley, C. P., & Scherer, S. (2013). The enhanced flipped classroom: Increasing academic performance with student-recorded lectures and practice testing in a “flipped” STEM course. *The Journal of Negro Education*, 82(3): 339-347. doi: 10.7709/jnegroeducation.82.3.0339.

Tin T. Dang. (2012). Learner autonomy: A synthesis of theory and practice. *Internet Journal of Language, Culture and Society*. January 2012.

Wiginton, B. L. (2013). *Flipped instruction: An investigation into the effect of learning environment on student self-efficacy, learning style, and academic achievement in an algebra I classroom*. (Doctoral dissertation). The University of Alabama. <https://search.proquest.com/docview/1505373684?pq-origsite=gscholar>.

Yilmaz, R. (2017). Exploring the role of e-learning readiness on student satisfaction and motivation in flipped classroom. *Computers in Human Behavior*, 70: 251-260. doi: 10.1016/j.chb.2016.12.085.

Zimmerman, B. J. & Risemberg R. (1997). Self-regulatory dimensions of academic learning and motivation. In: Phye G. D.(ed.). *Handbook of academic learning*: 105-125. Academic Press.