

Learner's Autonomy in an Undergraduate English Flipped Course

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Abstract. *The main purpose of the present study is to examine the extent to which flipping an English course affected students' autonomy compared to the traditional approach. The study took place at the Center for Preparatory Studies at Sultan Qaboos University in the educational year 2016/2017. The study involved two groups studying a foundation English course, sixteen students in the control group and seventeen in the experimental. The study employed a triangulation mixed methods research design where quantitative and qualitative data were collected at the same time and then combined to interpret the overall results. The quantitative data was collected through a Learner Autonomy Questionnaire and system logs. The qualitative data, on the other hand, was collected through teacher's interview. The results for the LAQ and system logs revealed that there were statically significant differences in favor of the experimental group ($U = 24.5, p = 0.000 < 0.05, r = 0.69$ and $U = 35.5, p = 0.000 < 0.05, r = 0.62$ respectively). The qualitative data collected through interviewing the teacher of the two groups involved in the study revealed that the experimental group was more autonomous than the traditional one. All results from the three tools used to examine learner autonomy were in favor of the experimental group as the experimental group was found to be more autonomous than the control group. The study ends up with some implications and recommendations for future research.*

Keywords: Flipped classroom; learner autonomy; higher education; achievement; autonomous learners; undergraduates, English course.

Introduction

Although flipped classroom approach is gaining popularity among educators all over the world, its implantation is limited (Sahin, Cavlazoglu & Zeytuncu, 2015; McLean, Attardi, Faden & Goldszmidt, 2016; Hung, 2017; Marshall, 2017). In their scoping review, O'Flaherty and Phillips (2015) summarized the results of 28 studies related to the use of flipped classroom in higher education. Interestingly, it has been noted the absence of such studies in Europe and Middle East. The main overall findings of this scoping review showed that students were more satisfied with the flipped classrooms than the traditional ones (Lage, Platt & Tregila, 2000; Pierce and Fox 2012; Strayer, 2012; Critz and Wright, 2013; Davies, Dean & Ball, 2013; Forsey, Low & Glance 2013; Mason, Schuman & Cook, 2013; McLaughlin et al, 2013; Butts, 2014; Hoffmann, 2014; Wilson, 2014; Yeung & O'Malley, 2014; Young et al, 2014). Furthermore, there was an increase in attendance from 30% to 80% (Prober & Khan 2013). Qualitative comments were also reported by some studies included in O'Flaherty's and Phillips's scoping review such as implementing the flipping approach empowered learners, enhanced their autonomy and increased collaboration and communication among groups (Strayer, 2012; Critz & Wright 2013; Davies, Dean & Ball 2013; McLaughlin et al, 2013;).

Similar to flipped classroom, learner's autonomy has lately received interest in the field of English language. Learners' autonomy is defined by Holec (1981, p.3) as "the ability to take charge of one's own learning". Among the three basic psychological needs (competence, relatedness, and autonomy), autonomy is considered the most important (Deci & Ryan, 2000). Affected by the social constructivism theory of learning, educators nowadays believe that language proficiency is actively constructed by students through "an autonomous social and experiential process" (Sprenger & Wadt, 2008, Nosratinia & Hossaini, 2017). Therefore, many studies have targeted studying the influence of different pedagogical factors in enhancing students' autonomy (Lightbown & Spada, 2013, Nosratinia & Hossaini, 2017). This study, as a result, targeted assessing the extent to which flipped classroom affected the learner's autonomy and how autonomous the students would be.

Background

There is a concern among administrators and educators at the Center for Preparatory Studies at Sultan Qaboos University about students' low English proficiency and the lack of their autonomy. A qualitative study conducted by Al- Mahrooqi (2012) which involved 100 students from Sultan Qaboos University investigated the factors causing low English proficiency in Oman based on students' prospective. The factor which topped the list was the teacher's factor as 85% of students thought that teachers were the main cause for their low level in English language. This percentage showed that these students were not autonomous learners and therefore were largely dependent on their teachers to develop their English proficiency. This finding goes in line with the fact that there is a concern among the management and the instructors at SQU Language Center (known now as CPS) that the existing strategies used to promote autonomy among learners are not achieving the desired outcomes (Borg & Al-Busaidi, 2012).

Moreover, another reason for the low level in English language academic achievement is that the class time is used more by teachers than by learners which mean that students get little time to practice the language inside the classroom (Al Mahrooqi, 2012; Al Hosni, 2014). However, in the flipped classroom the students are assigned to study the content on their own outside the classroom which can train them to be more autonomous learners and take responsibility of their own learning as well as engaging them in the learning process since the content is delivered through technology. This makes the flipped classroom compete with the preferences of the students who belong to the digital native generation.

In conclusion, conducting this study in the current context (CPS at SQU) for the first time to teach an English course may contribute to the limited research done on the effectiveness of the flipped classroom especially in regards to English language instruction. It also suggests a pedagogical approach to be used to address the low level of English proficiency and the lack of autonomy among students at CPS. It can be an eye-opening experience for the teacher who will apply this method in the class and it might encourage other teachers in the CPS to know more about it and to embrace it in their teaching to engage students, encourage them to be more autonomous learners and to win more time for in-class practice which is usually missing in English classes. In fact, there is a dire need to document evidence about the direct and indirect relationship connecting flipped classroom, and autonomy especially in the Arab context where traditional approaches of teaching English are heavily implemented at school and tertiary levels.

Instrumentation and Methodology

This study adopted a triangulation mixed methods research design. The purpose of employing this type of research design is to have a comprehensive understanding of the topic investigated. The qualitative data was collected through teacher's interview whereas the quantitative data was collected through Learner Autonomy Questionnaire and system logs.

First, Learner Autonomy Questionnaire was used to address learner autonomy from the students' prospective. The questionnaire was designed by Zhang and Li (2004). One reason for choosing this questionnaire is that it was revised on the basis of the learning strategies that were classified by Oxford (1990), O'Malley and Chamot (1990) and Wenden (1998). Besides, many studies used this tool and revealed that it is of high reliability and validity (Dafei, 2007; Nematipour, 2012; Rahman, 2012; Shangarffam& Ghazi, 2013). Utilizing this instrument in the present study went through various phases including translation, back translation and piloting. The final version of the questionnaire consisted two parts with reliability analysis on each parts produced a Cronbach's Alpha above 0.7, which is good based on (Priyatno, 2012; Sprinthall, 1997; Sekaran, 2006).

Second, LANC1026_Practice page on SQU Moodle was made available to both groups. This page which was validated by a panel of experts, targeted at examining learner autonomy as it contained some extra activities based on the content of the course. There were no marks allocated for doing the exercises but students were advised to do them for the sake of their learning. At the end of the course, the researcher examined the number of logins for each group by the features available on Moodle.

Third, case study design was used to collect the qualitative data. The data was collected through a semi structured interview with the teacher of the course which contained a fixed list of questions which are followed by follow-ups as appropriate.. A panel of experts reviewed the questions prepared for this purpose. The interview took place in week seven of the study.

The rationale for collecting data about learner’s autonomy via two different types of data collection tools was the complexity and multidimensionality of autonomy. In this study, autonomy was addressed from three angles, which were the students, the teacher and the online system used. Students were given a learner autonomy questionnaire (quantitative), the teacher was interviewed (qualitative) and students’ logs to “LANC1026_Practice Page” provided on the online system (Moodle) were counted (quantitative). The data that was collected from these different angels were analyzed and interpreted to have a better understanding of students’ autonomy. Figure 1.1 illustrates the research design used in this study.

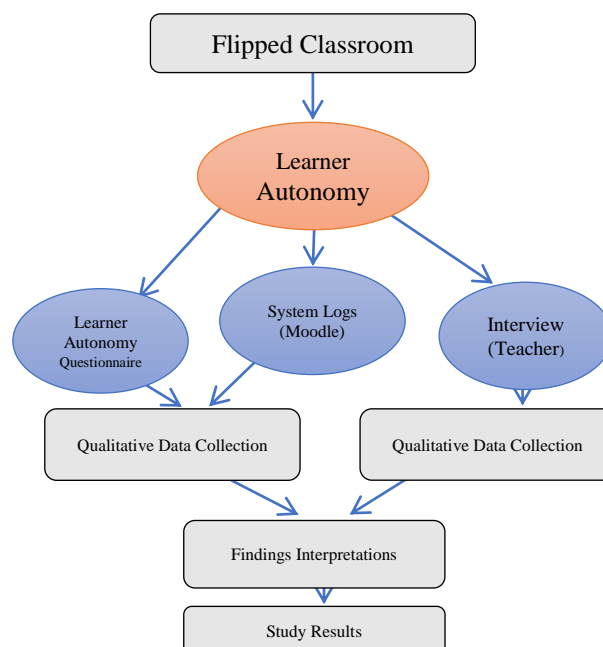


Figure 1.1: The data collection procedures used in this study

Research Results

This study aimed at examining the extent to which flipped classroom approach affected learner autonomy compared to the traditional approach. The data was collected through three different tools as this research followed the triangulation research design. The following lines elaborate more on each and every tool.

1. Autonomy questionnaire

Learner Autonomy Questionnaire was used to examine the autonomy of the learners involved in this study consisted two parts. The first part examined learners' self-perception in language learning and it consisted of eleven items. Table 1.1 shows overall average statistics for the traditional and experimental groups. It is clear from the table that flipped classroom group perceived flipped classroom more positively ($M= 4.05$, $SD= 0.62$) the traditional group ($M= 3.49$, $SD= 0.62$). To have better understanding of students' responses to the items of part one, Table 1.2 shows LAQ descriptive statistics of LAQ items for the control group and Table 1.3 shows LAQ descriptive statistics of LAQ items for the experimental group.

Table 1.1
Overall Average Statistics for LAQ (Part 1)

	Group	<i>N</i>	<i>M</i>	<i>SD</i>
LAQ	Traditional	15	3.49	0.62
	Flipped	17	4.05	0.62

Table 1.2
LAQ Descriptive Statistics for the Control Group (Part1)

	<i>N</i>	Control					<i>M</i>	<i>SD</i>
		1	2	3	4	5		
1. I think I have the ability to learn English well.	15	0%	6.7%	66.7%	26.7%	0%	3.20	.561
2. I preview before the class.	15	0%	73.3%	13.3%	13.3%	0%	2.40	.737
3. I make good use of my free time in English study.	15	0%	0%	60%	33.3%	6.7%	3.47	.640
4. I find I can finish my task in time.	15	6.7%	26.7%	60%	6.7%	0%	2.67	.724
5. I keep a record of my study, such as keeping a diary, writing review etc.	15	0%	0%	60%	40%	0%	3.40	.507
6. I make self-exam with the exam papers chosen by myself.	15	0%	0%	46.7%	33.3%	20%	3.73	.799
7. I reward myself such as going shopping, playing etc. when I progress.	15	0%	0%	0%	53.3%	46.7%	4.47	.516
8. I attend out-class activities to practice and learn the language.	15	0%	0%	6.7%	86.7%	6.7%	4.00	.378
9. During the class, I try to catch chances to take part in activities such as pair/group discussion, role-play, etc.	15	0%	0%	26.7%	53.3%	20%	3.93	.704
10. I know my strengths and weaknesses in my English study.	15	0%	6.7%	66.7%	26.7%	0%	3.20	.561
11. I choose books, exercises which suit me, neither too difficult nor too easy.	15	0%	0%	26.7%	60%	13.3%	3.87	.640
Overall							3.49	0.62

Table 1.3

LAQ Descriptive Statistics for the Experimental Group (Part1)

	<i>n</i>	Experimental					<i>M</i>	<i>SD</i>
		1	2	3	4	5		
1. I think I have the ability to learn English well.	17	0%	0%	17.6%	41.2%	41.2%	4.24	.752
2. I preview before the class.	17	0%	0%	5.9%	64.7%	29.4%	4.24	.562
3. I make good use of my free time in English study.	17	0%	0%	11.8%	23.5%	64.7%	4.53	.717
4. I find I can finish my task in time.	17	0%	0%	5.9%	64.7%	29.4%	4.24	.562
5. I keep a record of my study, such as keeping a diary, writing review etc.	17	0%	0%	11.8%	82.4%	5.9%	3.94	.429
6. I make self-exam with the exam papers chosen by myself.	17	0%	0%	17.6%	76.5%	5.9%	3.88	.485
7. I reward myself such as going shopping, playing etc. when I progress.	17	0%	0%	0%	58.8%	41.2%	4.41	.507
8. I attend out-class activities to practice and learn the language.	17	0%	5.9%	64.7%	11.8%	17.6%	3.41	.870
9. During the class, I try to catch chances to take part in activities such as pair/group discussion, role-play,etc.	17	0%	0%	11.8%	64.7%	23.5%	4.12	.600
10. I know my strengths and weaknesses in my English study.	17	0%	0%	17.6%	52.9%	29.4%	4.12	.697
11. I choose books, exercises which suit me, neither too difficult nor too easy.	17	0%	0%	58.8%	35.3%	5.9%	3.47	.624
Overall							4.05	0.62

As shown in table 1.3, with the exception of items 8 and 11, more than 80% of the learners in the experimental group assessed their autonomy more positively (4 and 5) than those in the control group. Specifically, for the first item, 82% of learners in the experimental group responded that they had the ability to learn English well compared to 27% of the learners in the control group. In response to item two, 94% of the students in the experimental group responded that they previewed before class compared to 13% in the control group. This percentage goes in line with the way the flipped environment was set up as students had to come to class prepared for the lesson. In responding to item three, 88% of the students in the experimental group responded that they made good use of their free time in learning English compared to 39% in the control group.

Regarding the fourth item 94% of the students in the experimental group declared that they could finish their tasks on time whereas only 7% of the students in the control group were able to do so. In responding to item five 88% of the students in the experimental group stated that they kept diary and took notes of what they studied whereas the percentage was 40 in the control group. In regards to item six, 82% of the students in the flipped classroom examined themselves whereas 53% of the control group did. Interestingly, almost all students from both groups stated that they rewarded themselves when they make progress.

In responding to item eight, only 29% of the students in the experimental group stated that they attended outclass activities whereas the percentage was 93% for the control group. This might be due to the fact that learners in the flipped classroom had to prepare the content of their lessons which makes their time limited. Regarding item nine, 88% of the students in the experimental group responded that they tried to take chances to take part in the discussions and activities whereas 73% of the students in the control group did. In responding to item ten, 82% of the learners in the flipped classroom declared that they knew their strengths and weaknesses while studying English compared to 27% in the control group. In regards to item eleven, 41% of students in the

experimental group stated that they chose books that suited their level compared to 73% in the control group. This percentage may be due to the fact that the students involved in the flipped classroom had more tasks to do in regards to the preparation of the lessons compared to the control group. In addition, they used the practice Moodle, which contained exercises, related to the content more than the students in the control group.

The second part of the questionnaire consisted of nine items. Table 1.4 shows overall Descriptive statistics for both groups. It is clear from the table that the students in the flipped classroom group were more autonomous ($M= 3.49$, $SD= 0.78$) than the traditional group ($M= 3.14$, $SD= 0.78$). To have better understanding of students' responses to questionnaire items in part two, Table 1.5 shows the descriptive statistics of the control group and 1.6 shows the descriptive statistics for the experimental group.

Table 1.4
Overall Descriptive Statistics for LAQ (Part Two)

	Group	<i>N</i>	<i>M</i>	<i>SD</i>
LAQ	Traditional	15	3.14	0.78
	Flipped	17	3.94	0.78

Table 1.5
LAQ Descriptive Statistics for the Control Group (Part Two)

	<i>n</i>	Control					<i>M</i>	<i>SD</i>
		1	2	3	4	5		
12. I study English here due to:	15	6.7%	0%	46.7%	26.75	20%	3.53	1.060
13. I think the learner-teacher relationship is that of:	15	13.3%	20%	40%	26.7%	0%	2.80	1.014
14. I think my success or failure in English study is mainly due to:	15	6.7%	0%	40%	40%	13.3%	3.53	.990
15. Whether students should design the teaching plan together with teachers or not, my opinion is:	15	0%	26.7%	73.3%	0%	0%	2.73	.458
16. When the teacher asks questions for us to answer, I would mostly like to:	15	13.3%	53.3%	20%	13.3%	0%	2.33	.900
17. When I meet a word I don't know, I mainly:	15	0%	0%	66.7%	26.7%	6.7%	3.40	.632
18. When I am asked to use technologies that I haven't used before (e. g. internet discussion).	15	0%	0%	66.7%	33.3%	0%	3.33	.488
19. I think the following way is most useful in my English study:	15	0%	0%	46.7%	33.3%	20%	3.73	.799
20. I usually use materials selected:	15	0%	3.3%	46.7%	20%	0%	2.87	.743
Overall							3.14	0.78

Table 1.6

LAQ Descriptive Statistics for the Experimental Group (Part Two)

	N	Experimental					M	SD
		1	2	3	4	5		
12. I study English here due to:	17	0%	0%	5.9%	52.9%	41.2%	4.35	.606
13. I think the learner-teacher relationship is that of:	17	5.9%	17.6%	11.8%	41.2%	23.5%	3.59	1.228
14. I think my success or failure in English study is mainly due to:	17	5.9%	0%	29.4%	29.4%	35.3%	3.88	1.111
15. Whether students should design the teaching plan together with teachers or not, my opinion is:	17	0%	0%	11.8%	52.9%	35.3%	4.24	.664
16. When the teacher asks questions for us to answer, I would mostly like to:	17	0%	0%	41.2%	41.2%	17.6%	3.76	.752
17. When I meet a word I don't know, I mainly:	17	0%	0%	23.5%	64.7%	11.8	3.88	.600
18. When I am asked to use technologies that I haven't used before (e. g. internet discussion).	17	0%	0%	29.4%	41.2%	29.4%	4.00	.791
19. I think the following way is most useful in my English study:	17	0%	0%	11.8%	70.6%	17.6%	4.06	.556
20. I usually use materials selected:	17	0%	0%	41.2%	47.1%	11.8%	3.71	.686
Overall							3.94	0.78

As the two tables revealed, the percentage of the students who chose “4” and “5” which weigh higher were from the experimental group. In regards to item twelve, 94% of the students in the experimental group stated that they studied English because they wanted to get a good job and to know more about the English culture compared to only 47% in the control group. This result indicates that students in the experimental group were intrinsically motivated to learn the language. In responding to item thirteen, 65% of the students in the experimental group declared that they regarded the learner-teacher relationship as partners as well as explorer and director compared to only 27% in the control group. This result shows that although students were autonomous in their studying, they still regarded teachers as important element to guide them through their learning process. Regarding item fourteen, 65% of students in the experimental group stated that they thought that their success or failure in English language depended on their own effort whereas 53% of the students in the control group chose the same answers. This result shows that students in the flipped classroom accepted to be more responsible of their learning.

In responding to item fifteen, 88% of the students in the experimental group were very positive about designing the teaching plan with teachers whereas the percentage dropped to reach 0% in the control group. With respect to item sixteen, 59% students in the experimental group declared that they preferred to clarify questions from teachers and to join pair/group discussions compared to only 13% of students in the control group.

In responding to item seventeen, 77% of the experimental students stated that they preferred to use peer assistance and looked up the words in the dictionary whereas the percentage was 33% for the control group. With respect to item eighteen, 71% of the students in the experimental group declared that they tried to learn new skills or learn by following others whereas only 33% of the control group selected these choices. In regards to item nineteen, 88% of the students in the experimental group preferred to have group discussion and classifying, grouping or comparing as useful ways in their English study. This percentage dropped to 53% in the control group. With

respect to the last item, 59% of the students in the flipped classroom stated that they preferred to use materials selected by themselves. However, the percentage dropped to reach 20% in the control group where the majority preferred the materials to be chosen by their teachers.

Table 1.7 shows the descriptive statistics of the total degree of autonomy for both the control and experimental groups. According to the details shown, the average of the experimental group was the highest ($M= 80.06$, $SD= 7.55$) while the control group had the lowest ($M= 66.60$, $SD= 7.28$).

Table 1.7
Group Statistics for the Total Score of Autonomy Questionnaire

	Group	<i>N</i>	<i>M</i>	<i>SD</i>
Autonomy	Control	15	66.60	7.28
	Experimental	17	80.06	7.55

Table 1.8
Mann-Whitney Test for the Total Score of Autonomy Questionnaire

Ranks				
	Group	<i>N</i>	Mean Rank	Sum of Ranks
Academic Achievemen t	Traditional	15	9.63	144.50
	Flipped environment	17	22.56	383.50
	Total	32		

Table 1.8 (cont.)
Mann-Whitney Test for the Total Score of Autonomy Questionnaire

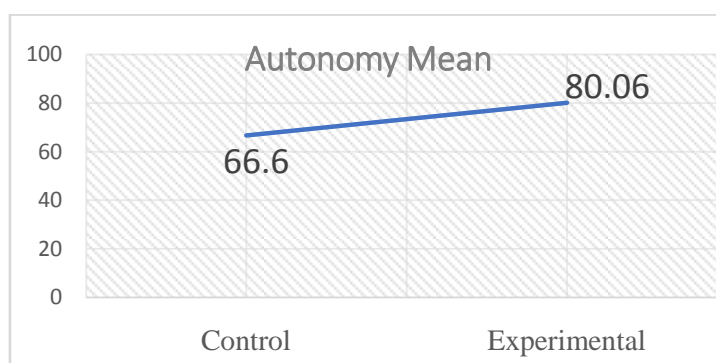
Test Statistics ^a	
	Academic Achievement
Mann-Whitney U	24.500
Wilcoxon W	144.500
Z	-3.895-
Asymp. Sig. (2-tailed)	.000
Exact Sig. [2*(1-tailed Sig.)]	.000 ^b

a. Grouping Variable: Group

b. Not corrected for ties.

Table 1.8 presents the results of Mann-Whitney Test for the total score of Learner Autonomy Questionnaire. Results revealed that there is a significant difference in autonomy between the experimental group (MRank= 22.56) and control group (MRank= 9.63), $U = 24.5$, $p = 0.000 < 0.05$, $r = 0.69$. This result is presented in Figure 1.2 which shows that the experimental group outperformed the control one in autonomy.

Figure 1.2
Autonomy Mean



2. System logsof LANC1026_Practice Page

LANC1026_Practice Page targeted examining learner autonomy as it contained practice activities based on the content of the course with no marks allocated for accessing them. LANC1026_Practice Page was introduced to both groups only once. The teacher explained how these exercises could help students to improve their English. Teacher didn't assign homework or remind students of this page. At the end of the course, the researcher examined the amount of log ins for each group by using the log report feature available on Moodle. Table 2.1 shows descriptive statistics of the system logs for both the control and the experimental groups. As revealed from the table, the average of the experimental group was the highest ($M = 6.82$, $SD = 1.98$), while the control group had the lowest ($M = 4.20$, $SD = 1.21$).

Table 2.1
Group Statistics for System Logs

	Group	<i>N</i>	<i>M</i>	<i>SD</i>
System logs	Control	15	4.20	1.21
	Experimental	17	6.82	1.98

As presented in Table 2.2, a Mann-Whitney Test indicated that there is a significant difference in system log between the experimental group (MRank= 21.91) and control group (MRank= 10.37), $U = 35.5$, $p= 0.000 < 0.05$, $r= 0.62$. The results, which are in favor of the experimental group, are presented in Figure 2.1.

Table 2.2
Mann-Whitney Test for System Logs

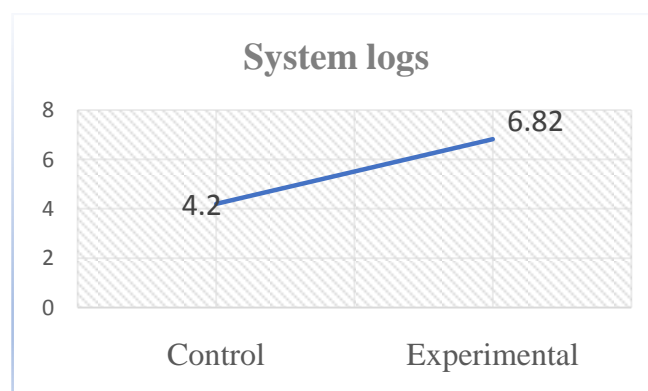
Ranks				
	Ach_cat	N	Mean Rank	Sum of Ranks
System log	Control	15	10.37	155.50
	Experimental	17	21.91	372.50
Total		32		

Test Statistics ^a	
	Academic Achievement
Mann-Whitney U	35.500
Wilcoxon W	155.500
Z	-3.525
Asymp. Sig. (2-tailed)	.000
Exact Sig. [2*(1-tailed Sig.)]	.000 ^b

a. Grouping Variable: Ach_cat

b. Not corrected for ties.

Figure 2.1
Means of System Logs



3. Teacher's Interview

The third tool used to assess learner autonomy was semi- structured interview which was conducted with the teacher who taught the two groups involved in this study. The aim of this interview was to triangulate the data which was obtained through learner questionnaire and system logs to examine students' autonomy. The teacher showed deep understanding of what learner autonomy.

In responding to the question about how the teacher assessed that students were autonomous, the teacher answered that she could assess students' autonomy when they came to class prepared and that she could see that they knew better of the subject of the lesson. She added that students' pace was better as they could do more activities on the advanced skills. Students also asked questions and sought clarification of the points they did not understand which helped her see that they had been doing some work outside the classroom. Students also want to know the way ahead. They also directed themselves according to the teacher's guidance at their own pace to achieve the goals. The teacher added that there was more awareness when the students were more autonomous.

Moreover, there was more individualized attention given to the learners as when they finish one activity they could move to the next which was higher in the ability or they could assist the slower ones. In addition, there was more chance to do more. In contrast, in the traditional classroom the teacher was the provider of information which affected the whole pace of the lesson and the whole concept of autonomous students. The teacher stressed the fact that students in the traditional classroom were more relying on the teacher to provide them with the information. She said that as a result of that, the cognitive level stayed at a lower end.

The teacher compared between the two learning environments in both groups as she explained that the flipped classroom was much more better. She stressed that although it took the researcher much time to set up the system, it saved a lot of time in the actual teaching. Students were guided through it and then they naturally became more independent. She added that it took some time at the beginning but eventually they got in to it and they were very positive about it. The teacher emphasized that the dynamics of the flipped classroom environment helped her more to enhance the autonomy of her students compared to the traditional. She added that the way the last was set up made it difficult for her as a teacher to boost her students' autonomy because they waited for her to give them the information and were more dependent on her. The answers of the teacher were in favor of the experimental group.

By examining the results of analyzing the data obtained from the three different tools that were used to examine students' autonomy (LAQ, LANC1026_Practice page logs and teacher's interview), it was found that the above results were in favor of the experimental group.

DISCUSSION OF RESULTS

This study targeted examining the extent to which flipping LANC1026 affected learner autonomy compared to the traditional approach. The data to answer this question was collected via three tools which were Learner Autonomy Questionnaire, Moodle System logs and teacher's interview. All three tools concluded that the flipped group was more autonomous than the traditional one. This result coincides with the results and findings of other studies including (Arikan & Bakla, 2011; Hashemi & Aziznezhad, 2011; Meri, 2012; Nematipour, 2012; Rahman, 2012; Khusnia, 2015; Homma, 2015).

One justification for this conclusion is that "the flipped classroom requires a lot of autonomous work." (Johnson et al, 2015, p. 38). In this study, students in the flipped environment had to come to class prepared which meant that they had to spare time to go through the materials of the content and put effort into understanding it. They also had to use the class time in doing more activities on the content as well as assessing other students in their learning process. Moreover, the technology used helped to establish learner autonomy and provided students with means to control their learning process. They could access the content at any time, at any place and at their own pace. They decided upon where and when they accessed the content.

In addition, the clarity of the process, goals and roles of the whole implementation provided a clear awareness and understanding of what was required and expected from students by implementing this model. As the semester started, PAAA was explained to students. It is an implementation phase guide that was developed by the researcher based on standard flipped classroom to guide the implementation stage of flipping the foundation course. It aimed at making the steps of flipping this course clear to all participants involved in this study. Their role and responsibilities were highlighted. The new role as active learners was introduced to them, as they would no longer be receptive. It was stressed that they had to come to class prepared, as everything else would depend on that. The character of the teacher here played a crucial role as it was important to make students feel the importance and seriousness of this stage. As the teacher explained in the interview, it was difficult for them at the beginning but by time they got used to it. It agreed upon in literature that students do better when they know what is expected from them and knowing exactly what they are supposed to do helped to gain the benefits of this approach (Hung, 2001; Ormrod, 2008).

In fact, autonomous learner is one of the main pillars that are essential for a successful flipped classroom. That is due to the fact that Flipped classroom approach requires students to be more responsible for their learning process. If students do not take the responsibility of their learning, flipped classroom approach will not be effective.

Based on the results of this study, it can be concluded that providing a healthy environment for students to be autonomous in a flipped classroom environment is crucial. In order to do that, during the different stages of the implementation of this study, the following five factors were provided. First, PAAA was introduced to students at the initial stage of the study. Students were informed about what exactly they had to do. The journey they were supposed to take was made clear to them. Their role, responsibilities, learning outcomes, rationale of the approach, and solutions to the challenges they may face were clarified to them from the beginning.

Second, students were trained according to their needs. They were trained by the teacher on the concept of flipped classroom, how it worked and how to get the maximum of its benefits. They also got training on how to access the materials and the content used to flip the lessons. Some students did not have technological skills that allowed them to access the materials and use them effectively in their learning such as pausing and rewinding as many as they need or downloading the Moodle App to their smart phones. Training them on that provided them with the tools they needed to gain the benefits of such an approach.

The third feature that helped providing students with a healthy environment was making sure that they had access to the flipped content. Accessing the materials that were prepared to flip the lessons was essential when implementing a flipped classroom. Without this, the preparation stage would not have been done and the whole other steps would not have been achieved. Therefore, it was important to provide students with various ways to reach the content. Failing to do that would have hindered them from fulfilling the required work which would have affected their autonomy as they would not have been able to take responsibility of their learning. As it evident in the literature, there is a significant correlation between students taking responsibility of their own learning and their academic achievement (Hashemian & Soureshjani, 2011; Reeve, 2014).

Fourth, providing students with preparation materials that they could prepare in reasonable time and that were of reasonable quality was essential in flipping the course. That is due to the fact that students usually feel overloaded and bored when they have to prepare dense materials. In the current study, the preparation stage did not exceed fifteen minutes which was reasonable for the students' level. It is also advised that the materials should be clear and of good quality so when they prepare they do not get annoyed by the unclearness or low quality of the materials which will affect their autonomy in fulfilling the required work. This was taken into account at the preparation stage of this study.

Last but not least, professional teacher played a major role in the process of flipping classroom successfully as she was there for her students. She provided students with guidance and immediate support to accomplish the required tasks according to their needs and learning styles. The importance of the teacher's role has been stressed in flipped classroom. With their teacher's help, students can reach the ultimate level of being autonomous learners and gain the best of this approach. The five features explained earlier can be gathered in an acronym which is (ITAPP) which stands for Informing students, Training, Access, Preparing materials and Professional teacher.

Conclusions

Based on the analysis of the data and the results of the research, there are remarkable conclusions about the effects of flipped classroom approach on enhancing learner autonomy. The three tools used in this research to assess learner autonomy revealed that the implementation of a flipped classroom environment enhanced learners' autonomy as the students in the experimental group were more autonomous compared to the ones in the control group. The study therefore, recommends implementing flipped classroom approach in

other courses at the CPS. However, a significant limitation of the research is that it was conducted on a small sample of students, as the typical number of students in foundation courses is small to ensure that they receive the maximum attention to develop their skills. Further research is recommended to study the effects of flipped classroom of larger number of students.

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