



EXPLORING STUDENTS' ACADEMIC ACHIEVEMENT
AND AUTONOMY IN A FLIPPED ENGLISH
CLASSROOM: A CASE STUDY

BY

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ABSTRACT

This study is a mixed mode case study that adopted concurrent triangulation design aimed at examining whether there was any significant difference in students' academic achievement when studying in a flipped environment opposed to a traditional one. The study also targeted investigating the extent to which studying in a flipped classroom affected learner autonomy compared to the traditional. Moreover, it explored whether there was any significant difference in academic achievement in the flipped environment in terms of autonomy and gender which is rarely explored in the flipped environments. Additionally, the study investigated the extent to which the flipped environment affected the five language skills components in the flipped course LANC1026. The study took place at the Center for Preparatory Studies (CPS) at Sultan Qaboos University in Oman in 2017/2018. The participants of the study were thirty-two foundation students, seventeen were in the experimental group and fifteen in the control. The implementation of the flipped classroom followed PAAA, a flipped classroom implementation guide developed by the researcher and validated by experts. Results revealed that there was a significant difference in the academic achievement in favor of the experimental group as $U = 69$, $p = 0.027 < 0.05$, $r = 0.39$. Eta Squared test revealed that Eta Squared = 0.138 > 0.13 which indicated a large effect of the flipped classroom approach on the academic achievement. All three tools used to examine learner autonomy were in favor of the experimental group as the results for the LAQ and system logs were $U = 24.5$, $p = 0.000 < 0.05$, $r = 0.69$ and $U = 35.5$, $p = 0.000 < 0.05$, $r = 0.62$ respectively and the qualitative data collected through interviewing the teacher of the two groups indicated that the experimental group was more autonomous than the traditional one. ANOVA result for regression test showed that $F = 2.786$ with p -value $0.116 > 0.05$ and the regression coefficients were $T = 1.669$ with p -value $0.116 > 0.05$ which indicated that there was no significant difference in the academic achievements of male and female students who studied in the flipped classroom. Findings also showed that academic achievement of the students who studied in the experimental group was affected by the level of their autonomy as the results for the LAQ and system logs were $U = 21$, $p = 0.046 < 0.05$, $r = 0.35$ and $U = 18$, $p = 0.028 < 0.05$, $r = 0.39$ respectively. The qualitative data obtained from the interview with the teacher indicated that the students who were more autonomous were more proficient. Descriptive statistics used to test the hypothesis of the effect of flipping English course on its five language skill components showed that there was a difference in the effect of flipped course on its five language components in favor of language use with Eta Squared = 0.494 whereas the lowest effect was on reading with Eta Squared = 0.145. Several recommendations were proposed. The study calls for more research to be conducted on the effectiveness of flipped classroom across the different disciplines especially in the Omani context. The study also recommends using PAAA as an implementation guide of FC especially for new flippers. Moreover, the study recommends expanding the limited scope of implementing flipped classroom from flipping lessons and courses to having a flipped school.

مُلخَصُ البَحْث

يهدف البحث إلى تعرّف أثر توظيف بيئة الصف المقلوب مقارنة ببيئة الصف التقليدي على التحصيل الدراسي والاستقلالية لدى طلاب مركز الدراسات التحضيرية في جامعة السلطان قابوس، ويسعى إلى استكشاف تأثير النوع ودرجة الاستقلالية على التحصيل الدراسي لدى الطلاب في بيئة الصف المقلوب، وكذا أثر توظيف بيئة الصف المقلوب على المهارات اللغوية، وقد تألفت عينة الدراسة من ٣٢ طالبًا موزَّعين على شعبتين؛ اختيروا عشوائيًا ممن درسوا مقرّر (LANC1026) في العام الدراسي ٢٠١٧-٢٠١٨؛ المجموعة التجريبية ١٧ طالبًا، والمجموعة الضابطة ١٥ طالبًا، وأتت الباحثة دراسة الحالة باستخدام تصميم التثليث المتزامن الذي تضمن استخدام المنهج المختلط لجمع بيانات كمية ونوعية، ومن ثم تحليلها ومقارنتها؛ لاستخلاص النتائج، وقد جُمعت البيانات الكمية باستخدام الاختبار التحصيلي واستبانة استقلالية الطالب وتقرير دخول نظام (Moodle)، بينما استُخدمت المقابلة لجمع البيانات النوعية، ولتوظيف الصف المقلوب استخدمت الباحثة (PAAA) مرشدًا لعملية توظيف الصف المقلوب يستهدف الطالب والمعلم، وهو من إنتاج الباحثة وتحكيم عدد من المتخصصين في تقنيات التعليم والقياس والتقويم، وقد خلصت الباحثة إلى أن هنالك فروقًا دالة إحصائيًا على التحصيل الدراسي والاستقلالية للطلاب لصالح بيئة الصف المقلوب، وأن النوع لا يؤثر على تحصيل الطلاب في بيئة الصف المقلوب، في حين أن هنالك تأثيرًا لدرجة استقلالية الطالب على تحصيله الدراسي، فكلما زادت الاستقلالية زاد التحصيل الدراسي، وأيضًا كان التأثير الأكبر لبيئة الصف المقلوب على استخدام اللغة، بينما تأثيرها الأقل كان على مهارة القراءة، وعليه؛ توصي الباحثة بإجراء المزيد من الأبحاث لدراسة تأثير الصف المقلوب في منطقة الشرق الأوسط بعامة، والبيئة العمانية بخاصة؛ على مختلف المواد الدراسية والفئات الطلابية باستخدام عينات أكبر، ولأوقات أطول، وعلى متغيرات أخرى من مثل التفكير الإبداعي والنقدي وغيرهما، كما تدعو إلى استخدام المرشد (PAAA) في توظيف الصف المقلوب، ولا سيما للمبتدئين، وتوسيع نطاق التوظيف ليتجاوز الحصص والمحاضرات والمقررات، ويشمل المدرسة المقلوبة والجامعة المقلوبة.

APPROVAL PAGE

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DECLARATION

I hereby declare that this thesis is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

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To my mother whose love and support are endless

To my father who has been calling me Dr. Suad since childhood

To my husband and our little angels

To my brothers and their families

To the ones sent my name in their prayers asking Allah to assist me

To the ones chasing their dreams no matter what, including

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LIST OF ABBREVIATIONS

CALL	Computer Assisted Language Learning
CPS	Center for Preparatory Studies
FC	Flipped Classroom
FLN	Flipped Learning network
LANC1026	Course Code for English for Humanities II
LA	Learner Autonomy
LAQ	Learner Autonomy Questionnaire
PAAA	The flipped classroom implementation guide developed by the researcher
SQU	Sultan Qaboos University
STEM	Science, technology, engineering and math subjects

CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION

Technology has opened new horizons in the whole world. With its rapid and consistent development, it affects almost all sides of humans' life. Education is no exception and as a result educational technology has become a very important trend in today's education. It plays a crucial role in making education more productive and effective. It can provide new ways of teaching and learning (National Research Council, 1995). It can also increase the development of students' skills and competences (Kuh & Vesper, 2001) as well as improve the quality of their education (Tinio, 2002; Gilakjani, 2017). Therefore, the door of educational systems should be opened to embrace technology, unleashing its power to reach the ultimate goals of learning.

This research is based on the "flipped classroom" model which is a creative way of blending technology with education. The following section highlights key information about this method.

1.2 BACKGROUND OF THE STUDY

Flipped classroom is one of the new educational concepts that were brought to life by technology. It has gained more followers nowadays. It was first introduced by Lage, Platt and Treglia (2000) who described it as reversing the instructional events done in classroom with the ones done at home, as students watch the lectures at home and do the exercises based on the previously viewed content at home under the teacher's guidance and help in the classroom.

Listening to a teacher lecturing means that the students are learning at the knowledge and comprehension levels in the cognitive domain of Bloom's taxonomy (Bloom, 1956). However, active learning which is a fundamental part of flipped classroom engages students more in the classroom. This pedagogical approach focuses on student learning rather than teacher teaching allowing students to analyze, collaborate and evaluate, which makes them use higher levels of thinking skills (Geer & Sweeney, 2012). The implementation of a flipped classroom would provide a framework in which instruction becomes more individualized, considerate of students' needs and active (Bergmann & Sams, 2012). The face-to-face time would be more valuable as it would be devoted to practicing skills, collaborating on projects and engaging more with the content (Hamdan & McKnight, 2013).

Oman, where this study takes place, is a developing country that highly values education. According to UNESCO Institute for Statistics (2008), Oman spends 31.1% of the governmental funds on the educational sector. This percentage exceeds most other Arab countries' expenses on education (Gonzalez et al. 2008). This shows that providing and utilizing educational technologies in higher education have been highly regarded by the Omani government.

Sultan Qaboos University (SQU), where this study has been conducted, was opened in 1986. It is the only governmental university in the Sultanate of Oman. Students at SQU can easily navigate the internet and get connected to the world (Al Rawahy, 2001). Technology labs and access to the internet are provided all over the university for free. Many online courses have been offered with noticeable number of users. A center for educational technology was also established as a support center to meet the demands of integrating technology in education (Al Musawi & Abdelraheem, 2004).

This study aimed at flipping an undergraduate course at SQU. This particular university was selected to conduct the research because it has the infrastructure for integrating technology into teaching which suggests that it can open the door for embracing new educational trends such as flipped classroom. The next section describes the importance of this study and highlights its value to the field of educational technology in general and to SQU in particular.

1.3 STATEMENT OF PROBLEM

Although flipped classroom approach is gaining popularity among educators all over the world, its implementation 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. Their findings showed that the students in the flipped classroom were more satisfied than the ones in the traditional classrooms (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, 2013; Yeung & O'Malley, 2014; Young et al, 2015). Similarly, there was an increase in the academic performance in the flipped classrooms compared to the traditional ones (Pierce and Fox, 2012; Ferreri & O'Connor, 2013; Mason, Schuman & Cook 2013; McLaughlin et al, 2013; Missildine et al, 2013) in addition to an increased attendance from 30%-80% (Prober & Khan 2013). Moreover, some qualitative comments reported by some studies included in O'Flaherty's and Phillips's scoping review revealed that 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;). Therefore, there is a need to study the effectiveness of flipped classroom approach in the Middle East as well. In fact, Higher Education Institutions are under increasing pressure to go through major changes in order to accommodate the conceptual requirements of the digital age. This is the main reason for the rise of the flipped classroom (Marshall, 2017; O'Flaherty & Phillips, 2015).

Moreover, most of the limited research conducted tend to be in the fields of STEM subjects; science, technology, engineering and math (Berrett, 2012, Engin, 2014) while the research on the effectiveness of flipped classroom compared to the traditional approach in regards to English language instruction is very limited (Engin, 2014; Egbert, Hung, 2015; Herma & lee, 2015; Han, 2015; Hung, 2017; Yang, 2017; Marshall, 2017). In fact, many educators have been reluctant to embrace flipped classroom approach due to the fact the it is totally different from other traditional approaches (Marshall, 2017). Educators at the Center for Preparatory Studies at SQU are no exception and this study is the first to target establishing a flipped classroom at CPS (see Appendix A). CPS receives more than 3500 students annually in the English Foundation Program to develop their competencies in English language before they move to their credit courses (Al-Sadi, 2015) and adopting such models may contribute to reaching this goal.

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". Many studies have shown that there is significant correlation between learner's autonomy and academic achievement

(Hashemian & Soureshjani, 2011; Reeve, 2014). Among the three basic psychological needs (competence, relatedness, and autonomy), autonomy is considered the most important (Deci & Ryan, 2000). Accordingly, the researcher aims at testing the extent to which flipped classroom affects learners' autonomy and how autonomous the students will be in the flipped environment.

In fact, suggesting implementing flipped classroom approach at CPS is based on the results of several studies conducted at CPS which showed that there is a concern among administrators and educators at CPS about students' low English proficiency and the lack of their autonomy. A qualitative research study conducted by Al- Mahrooqi (2012) investigated the factors causing low English proficiency in Oman based on students' prospective. The study involved a hundred students from Sultan Qaboos University. The factor which topped the list was the teacher factor as 85% of students thought that teachers were the main cause for their low proficiency in English language. This percentage revealed 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). The researcher, therefore, suggests implementing Flipped classroom approach as it may help in promoting the students' autonomy due to the fact that it requires a lot of autonomous tasks (Johnson, Adams Becker, Estrada, & Freeman, 2015).

Moreover, the students in Al Mahrooqi's study elaborated on the teacher's factor by stating that they used old-fashioned and traditional methods of teaching English which made them feel bored and unengaged in the English classes. This

feedback from students can be explained by referring to Prensky's work (2001) when he argued that there is a generation gap between the digital immigrants "teachers" and digital natives "students" which needs to be addressed. He stated that teachers who were not exposed to technology at all times have to compete with their students who used technology at their early age as the traditional methods of teaching make them feel bored and uninterested in learning. Embracing modern strategies that go in line with the new era may enhance students' interest in learning and promote their engagement in class.

In addition, the students blamed their teachers for their low level of English proficiency because the teacher's main concern was to finish the curriculum (Al Mahrooqi, 2012). This resulted in the students being passive learners in the classroom. The students also reported that the length of the English class was inadequate and there were no variety of activities used inside the classroom nor there were opportunities for them to use English outside the class. These findings above show that teachers were under pressure to cover the assigned curriculum which prevented them from using communicative activities with their students inside the classroom because they are time-consuming. This resulted in that the class time was used more by teachers than by learners which means that students get little time to practice the language inside the classroom (Al Mahrooqi, 2012; Al Hosni, 2014). One of the most important features of the flipped method is increasing student-student and teacher-student interaction in the classroom (Moore, Gillett & Steele, 2014). This approach also allows more time for the teachers to provide the learners with various in-class activities to practice the target language as the lecturing part is done outside the classroom (Bergmann & Sams, 2008). Assigning students to study the content on their own outside the classroom can train them to be more autonomous learners and take