The Effect of EFL Large classes on Yarmouk University Students' Achievement

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Abstract:
The primary goal of this research is to determine the effect of large classes on students' achievement at Yarmouk University. The research addresses two questions: What is the effect of class size on Yarmouk University students’ achievement in the English language (101)? Is there any statistically significant differences between the large and small group treatment on the achievement test? Large class is defined in this paper as a class of more than 45 students. The researcher used a grammar test as the study instrument. The questions were designed based on the grammar curriculum. The subjects of the study were Yarmouk University EFL students who were learning English as a university requirement. Two classes taught by the researcher, one composed of 45 students and the other of 103 students, took the test. The results revealed a relationship between performance and class size. The experimental group (the smaller class) performed better on the test than the control group (the large class). The results of this study highlight to educators the effect of large class on students’ achievement. Also, this may help in developing a curriculum that caters for large classes. In addition, this may draw the attention of university administrators to limit student numbers in English classes. Finally, this study may encourage the government to increase the university budget which would increase the number of classes.

Keywords: achievement, EFL, Jordan, large class, university education

Cite as: Asqalan, M. M. (2017). The Effect of EFL Large classes on Yarmouk University Students’ Achievement. Arab World English Journal, 8 (1). DOI: https://dx.doi.org/10.24093/awej/vol7no1.21
Introduction

The importance of the English language cannot be ignored, as it is the most widely spoken language in the world. It is used in international affairs, science, technology, and finance. Its acquisition can guarantee more opportunities of employment, traveling, higher education, and a better life (Crystal, 1997). Graddol (2001) states that the British council estimated that English is spoken as a the second language by about 3 75 million speakers and as a foreign language by about 750 million speakers.

Teaching English as a global language is growing in the Arab world. Arab countries have made the effort to facilitate the use of English among their citizens in this globalization era (Al-Khatib, 2000). The Hashemite Kingdom of Jordan, like all Arab countries, recognizes the importance of English language. Therefore, since the early days of its independence, the education system in Jordan has focused on teaching English as a foreign language from the earliest stages of education in both private and public education sectors.

At Yarmouk University, where the medium of instruction for most disciplines is English, all newly enrolled students are required to sit for a placement test to determine their level of proficiency in English. Based on their scores in the placement exam, the lower scoring students are required to do remedial English language skills (99) while the higher scoring students (50 or over out of 100) are required to do the more advanced English course (101). The objective of the two courses is to equip students with general knowledge and the basic skills of English language. Indeed, these basic English language courses provide a platform for these students' future careers within their chosen majors as they enter the global community.

In fact, students in Jordan face difficulties while learning English. They learn English through formal instructions and there is a little chance to learn it through interaction, which is only possible when students encounter tourists coming to visit the country (Rabab'ah, 2005). The fact that, in Jordan, as well as in most Arab countries using English only as an academic subject or a university requirement makes it difficult to be acquired if not practiced more often as practice is the most economical way of learning a language (Halliday et al 1984). Many researchers have investigated the reasons why Arab learners have difficulties while learning the language. Zughoul (1983), Mukattash (1983), and Suleiman (1983) summarize these problems as the lack of personal motivation, the inappropriateness of the English language curricula in academic institutions and the lack of the proper target language environment.

In addition, there are other reasons that lead to difficulties in learning English by university students such as large classes. Class size is a crucial issue and concerns faculty members and students as well. That is why a lot of research on class size has been conducted all over the world for some time now.

But what is the definition of a large class?

The literature has not shown an agreement on an exact definition of a large class. Indeed, the definition varies between countries, institutes and even between lecturers. For example, the average of large classes in Lancaster University is around 50 and in China 50-100 is normally called large.
The definition of a large class varies also across disciplines and teaching contexts. It is often said that a large class is a class that a student or the lecturer perceives to be large. Qiang & Ning (2011), define a large class is the one that includes more students than the teacher can manage and prepare for.

However, Hayes (1997) suggests that 30 students or less is the ideal size of a language class. At such number, he added, students have a good opportunity to communicate with each other. In conclusion, Class size between 40-60 was considered large in most studies (Watson Todd, 2006).

For the purpose of this paper, a large class refers to a class with a number of students exceeding 45.

Statement of the problem

Class size and its effects have been researched repeatedly but most of these studies concerned elementary and secondary schools rather than university level teaching. Moreover, the literature review reveals that the number of research about class size in the developed countries far exceeds this number in the developing countries. Therefore, more studies are needed to investigate the issue of class size in developing countries such as Saudi Arabia, Oman, Egypt and Jordan (Bahanshal, 2013).

Recent statistics published in Al-Rai daily newspaper has revealed the number of students enrolled in public universities in Jordan. The number of students enrolled in the ten universities in the first semester of this year 2014. Six out of the ten public universities have 55000 more students than they can provide for. Yarmouk University, which is a public university, is no exception.

In the academic year 2014/2015, 45000 students enrolled in undergraduate program at Yarmouk University alone. This exceeds the university's current capacity by 15548 students. The increase in students’ enrollment without a parallel and proportionate increase in manpower, resources, and space has resulted in an increase in the number of students in classes. Inevitably, this increase has an effect on teaching methods where the teachers do most of the talking, which may or may not have an effect on student achievement and performance. This is the question the researcher plans to answer within the scope of this paper.

The researcher, who is also an instructor at Yarmouk University Language Center, felt the urging need to conduct this research concerning the effect of large classes on achievement if such a relationship exists. The fact that class size is spiraling upwards makes the researcher believe that Yarmouk University is an ideal situation to conduct this research into large classes.

Questions of the Study

The aim of this study is to answer the following questions:

1-What is the effect of large classes on Yarmouk University students’ achievement in the English language (101)?

2- Are there any statically significant differences between the large and small group treatments on the achievement test?
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Purpose of the study
The purpose of the study is to investigate the effect of EFL large classes on Yarmouk University students’ achievement in the English language (101) in the second semester of the academic year 2015-2014.

Importance of the study
Previous research, as most literature reveals have supported the idea that class size significantly affects student achievement while other studies have revealed the effect was trivial or does not exist. These mixed results made it difficult to determine the effect of large class size. The purpose is to provide some useful data and recommendations to educators, researchers and administrators about the effect of large class on student achievement if the findings concluded that smaller is better.

The results of this study may help in developing adequate future curriculum, taking into consideration the effect of large classes on student achievement. They also may attract the attention of policy makers to increase the fund to the university. Furthermore, it may interest the university administrators to decide on the number of students in classes. Besides, they may interest students who have to choose among universities with different students/teacher ratio. Finally, the findings will add to the existing literature on university education in Jordan.

Limitation of the study
The generalization of the results of this study is limited to the students of English language (101) taught at Yarmouk University.

Review of related literature
Eight studies on the effect of class size on student achievement were studied by Toth & Montagna. They studied the research published on this topic between 1990 and 2000. Most of these studies consider course grades to gauge students’ achievement. Of the eight studies, two report no relationship between class size and students’ achievement (Hancock 1996; Kennedy & Seigfried 1997). Three of these studies report that large classes negatively affected students’ achievement (Borden & Burton, 1999; Gibbs et al., 1996; Raimondo et al., 1990). Two report mixed results (Hofman, Postcrano & Preszo 1994; Kopeika, 1990). One study reports a positive impact of large class size on students’ achievement, (Toth & Montagna, 2002).

Kickbusch (2000) states that reduction in class size to 20 students without changes in instructional methods doesn’t lead to a better achievement and that class size has more influence on students' attitudes and motivation than on their achievement. Some research also reveals that what affect learning process is the teacher's quality and methodology, not class size, (Maged, 1997; nakabugo, 2003 and O'Sullivan, 2006).

Hoxby (2000) studies the effect of class size on achievement and shows that smaller classes have either insignificant or no effect on student achievement. Milesi and Gamoran (2006) similarly report in their study that there was no evidence of class size impact on student achievement.
Richard Light (2001), on the other hand, finds a consistent correlation between the number of students in a class and their overall grades (GPA) and concludes that most of the time smaller is better with stronger students engagement. Resnick (2003) favors small class size in his research. He suggests that teachers in small classes pay greater attention to each individual student and so students feel a greater pressure to get engaged in class, and thus affects students’ achievement positively.

Moreover, Dillon, Kokkelenberg, and Christy (2002) find that students’ average grade points decline as class size increases. The chance of getting a B-plus or over decreases from 0.9 in small class size to about 0.5 in a class size of 120, and nearly 0.4 for a class size of 400. The three researchers again conduct a study of 760,000 observations over four years. The results show that grades are negatively affected in large classes. The effect of class size on students grades was very noticeable in larger classes when controlling variables such as peer effects, student ability, student level, course level, gender, and minority status, (Kokkelenberg, Dillon, & Christy, 2008).

In addition, (Joe Cuseo, 2007) reports that academic achievement (learning) and academic performance (grades) are lowered in courses with large classes in addition to other negative aspects of large class size; for example, large class size reduces students active involvement and depth and breadth of thinking and reduces the quality and frequency of instructor interaction with students as well as feedback to students. Also, Arias and Walker (2004) compare total exam scores for two large classes (90 students) and two small classes (25 students) and find out that students in small classes perform 3% higher on the exams.

Bandiera et al., (2009) examine records from a leading UK university and find a negative non-linear effect of class size on students' scores. Class size has a high impact on students' performance only at the very top and bottom of the class size distribution. They also conclude that students at the top of the grade distribution are affected the most.

Moreover, Bahanshal (2013) studies the effect of large classes on English teaching and learning. According to the teachers interviewed, the results of the study indicate that the outcome of the students is unsatisfactory due to the large number of students in one class. Her study also suggests some effective strategies to be applied while teaching large classes. Nguyen et al., (2014) conduct observations of classrooms at HUTECH University, Ho Chi Minh City, Vietnam to study the factors affecting English teaching and learning. The common theme was the crowded classes. The number of students enrolled in each class was higher than 50. According to them, classrooms in general, and in language classrooms in particular, small class size enhances the quality of education. They state that crowded classes can be a demotivation factor as it may hinder the students’ active participation. Of course as many studies have demonstrated that correlation between motivation and language achievement is highly positive, (Masgoret and Gardner, 2003).

Once again, Nguyen et. Al, (2015) study the factors affecting teaching and learning English as a foreign language at HUTECH University from the teachers’ prospective. The majority of teachers complain that the number of student in English classes is 50-55 students
which is considered large. This large number of students reduce the quality of teaching and learning as it makes it difficult for teacher to manage the class and to conduct communicative activities. The teachers said that it was impossible to achieve maximum benefits and effectiveness.

After this brief account of the review of the literature on the effect of class size on students’ achievement, it is clear that the results were inconclusive. However, this research is specific is conducted to examine the effect of large classes on Yarmouk University students’ achievement in English (101).

Method and procedure
This section presents the methodology followed in this study. It includes the study design, the population and sample of the study, the instrument, the validity of the instrument, the statistical analysis used to analyze the results and the procedures of the study.

Procedure
To test students’ achievement, the students enrolled in English (101) were given a multiple-choice question test on the grammar items covered during the second semester of 2014-2015. The test took approximately 20 minutes with all participants finishing within the allotted time. The possibility of grading bias is minimal since the multiple-choice method of testing is objective. The control group consisted of a class of 45 students. The experimental group consisted of 45 students randomly chosen from a class of 105 students. Both classes were taught by the researcher who controlled the variations in instruction, lecture material, topic coverage, and tests. Absences are generally low as students are required to attend at least 85% of a course and so absences are not related to class size. This research design is different from previous studies on class size reduction, where the teacher variable was not controlled (Blatchford, 2003; Galton and Pell, 2010).

The study methodology
The researcher used the quasi-experimental method by applying the tool to study two groups of students enrolling in English (101) at Yarmouk University.

Population of the study
The population of the study consisted of Yarmouk University students studying English (101) during the second semester of the academic year 2014-2015.

Sample of the Study
The sample of the study is composed of Yarmouk University students who study English as a university requirement in two different classes. Both classes were taught by the same instructor using the same strategy of instruction and covered the same material throughout the semester. The control group consisted of a small class of 45 students. The experimental group consisted of 45 students chosen randomly from a large class of 103 students. Table (1) shows that.
Table 1  
*The distribution of the study sample*

<table>
<thead>
<tr>
<th>Group</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>45</td>
</tr>
<tr>
<td>Control</td>
<td>45</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
</tr>
</tbody>
</table>

To ensure equal study groups before applying the study, the researcher applied a pre-test on the sample of the study. For the experimental and control group, Means, standard deviations, and (t-test) were calculated to measure their achievement. This is presented in table 2.

Table 2  
*Achievement of Yarmouk University students in English language pre-test.*

<table>
<thead>
<tr>
<th>Group</th>
<th>Number</th>
<th>mean</th>
<th>Std deviation</th>
<th>t</th>
<th>Df</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>45</td>
<td>12.09</td>
<td>2.39</td>
<td>1.783</td>
<td>42</td>
<td>0.082</td>
</tr>
<tr>
<td>Experimental</td>
<td>45</td>
<td>13.64</td>
<td>3.29</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>12.09</td>
<td>2.39</td>
<td>1.783</td>
<td>42</td>
<td>0.082</td>
</tr>
</tbody>
</table>

Table 2 shows that there are no statistically significant differences ($\alpha = 0.05$) of the average achievement of students in the English language (101) at Yarmouk University pre-test. The mean of the experimental group students' achievement is (13.64) compared to (12.09) for the mean of the students' achievement in the control group.

**Instrument of the test:**

The researcher, who is also an exam coordinator at the Language center, chose a sample of questions from the question bank used for English (101) students’ coordinated exam. The items of the test were carefully chosen so as to reflect Bloom's Taxonomy of learning domains. The final draft of the test consisted of (20) multiple-choice questions taken from the material covered during the semester, (8) items covered recalling, (7) items covered comprehension, and (5) covered application.

**Validity of the test**

To ensure the test validity, a jury of five instructors at the Language Center and the English department were kindly asked to judge whether the items were appropriate. They added some items and deleted others and suggested some modifications on some items. The researcher modified the items in the test in response to the jury's suggestions.

**Reliability of the test**

The reliability of the test was measured by administering it on a pilot sample of (20) Yarmouk University students who were chosen from outside the sample of the study. The researcher marked the test and gave one point for each correct answer and zero point for each incorrect answer. The following was conducted:
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1. Difficulty coefficient and discrimination coefficient were calculated for each item in the test. The difficulty coefficient ranged between (0.33-0.78) while the discrimination coefficient ranged between (0.33-0.68).

2. Reliability coefficient (Cronbach Alfa ) was calculated. It was found (.86) which was good for the purpose of the study.

The study variables:

The independent variable is the size of the class, one class having a large number of students and another having a small number of students. The dependent variable: achievement in the English language (101) measured by final test grades.

Procedures of the study:
- Getting the approval of Yarmouk University to conduct the test.
- Reviewing related literature to enrich the theoretical part of the study and to build the test.
- Preparing the test and establishing its reliability and validity.
- Administering the test during the final class period of the academic semester in January.
- Collecting and grading the test and analyzing the results in light of the study.
- Drawing conclusions according to the results of the study.

Statistical treatments:
The research questions of this study were tackled according to the following statistical treatments:
1. Means and standard deviations.
2. Cronbach's alpha coefficient.
3. Test (T- test).

Findings Of the Study
The purpose of this study is to find the effect of class size on students' achievement in the English language (101) at Yarmouk University, by answering the following question:

- Is there a statistically significant effect (α = 0.05) of the class size on the achievement of Yarmouk University students in the English language (101)?

To answer this question means and standard deviations were calculated, and (t-test) was conducted for the experimental and controlled groups to measure the achievement of Yarmouk University students in the English language (101). The results are presented in table 3.

Table 3
Means, standard deviations, and (t-test) for the experimental and controlled groups of Yarmouk University students on the achievement post-test.

<table>
<thead>
<tr>
<th>Group</th>
<th>Number</th>
<th>mean</th>
<th>std deviation</th>
<th>t</th>
<th>D f</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>control</td>
<td>45</td>
<td>13.32</td>
<td>2.15</td>
<td>4.233</td>
<td>42</td>
<td>*0.000</td>
</tr>
<tr>
<td>experimental</td>
<td>45</td>
<td>18.82</td>
<td>5.70</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
* Statistically significant at the level of statistical significance ($\alpha = 0.05$)

Table 3 shows that there is a statistically significant difference at $\alpha=0.05$ between the experimental and control groups. The mean of the experimental group was (18.82), compared with the mean of the control group which was (13.32). This shows the impact of class size on the achievement: the smaller the class size, the higher the achievement. Figure (1) demonstrates that.

![Figure 1](image)

**Figure 1** The performance of the experimental and control groups on the post-test

**Discussion of the Results**

The findings show that the high correlation between small class size and students test achievement clearly suggest that smaller classes contribute to students’ achievement in EFL. The findings suggest that large classes affect students’ achievement negatively.

**Conclusion**

This study adds to the literature by providing results of a quantitative research on class size and achievement. There is no doubt that small class size brings lasting benefits, especially for EFL students. Reducing class size to lower than 45 leads to better achievement. The attention the instructor gives to each individual student and consequently the students’ interest, engagement and attention that occur in small classes could account for the result of this study. In addition, the instructor may utilize more effective teaching methods to encourage student interaction, in small classes. In large classes, the method of teaching is mainly lecture-centered. This method usually neglects effective instructor-student interaction. In small classes, the instructor could have the ability to detect when a student is in need of help and to provide them with the necessary feedback.

**Recommendations**

In light of the findings of this study, the researcher recommends the following:
- The university should seek more financial support from the government so as to stop relying on tuition fees alone.
- The university should reconsider the number of students in introductory courses and appoint more lectures.
- Instructors should adopt group methods of teaching instead of teacher-centered lectures to address the problem of large classes.
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- Further studies should be carried out to find some suggested solutions to deal with the problem of large classes, especially with regard to effective teaching methods and assessment instruments that contribute to effective instruction and student learning.
- These results suggest avenues for further research to examine the relationship between class size and students achievement in other universities.

About the Author:
Manar M. Asqalan is an instructor at Yarmouk University, Irbid, Jordan where she has been teaching courses in English as a second language to undergraduate students for fifteen years. She has a master’s degree in translation. She is interested in research on major issues concerning English as a second language.

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