On the Efficacy of Team Teaching and Station Teaching in the Enhancement of Students’ Reading Comprehension in an EAP Situation

Jaber Khales Haghighi\textsuperscript{a,}* , Khadijeh Abdollahi\textsuperscript{b}

\textsuperscript{a, b} English Department, Ilam University, Ilam 69315-516 Iran

Abstract

The current study investigated the effectiveness of two models of co-teaching viz. team-teaching and station teaching in the promotion of the students’ reading comprehension in an EAP situation in Iran. Fifty two sophomore students, majoring at Marketing Management from Ilam University were selected as participants and based on their achieved score in the pre-test were assigned into two experimental and one control group. The participants in the first experimental group received instruction through team-teaching and the students in the second experimental group were taught through station teaching, but the participants of the control group were taught by one single teacher for the same hours of instruction. All participants took part in a final achievement test and the results were analysed through one-way ANOVA. The outcomes indicated that there was significant difference between the students’ performance and those in the experimental groups outperformed the control group. However, there was no statistically meaningful difference between the students’ performance in the team-teaching and station teaching groups.

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Selection and peer-review under responsibility of Urmia University, Iran.

Keywords: Co-teaching models; station teaching; team teaching; reading comprehension; ELT in Iran

1. Introduction

The idea of English for Specific Purposes (ESP) has been discussed in English Language Teaching (ELT) from 1960s (Richards, 2001); however, the students’ needs and wishes to learn English for specific purposes motivated

* Corresponding author. Tel.: +98-917-738-8013; fax: +0-000-000-0000.
E-mail address: Jaber.haghighi@gmail.com
the scholars to rapidly develop ESP in 1980s. In recent decades, to constructively respond the academic needs of students, English for Academic Purposes (EAP) and English for Occupational Purposes were developed. The former that is the focus of the current study, through analyzing the students' needs and texts, aims at making the students ready for having effective communication (Dudely-Evans & St. John, 1998). Thus, EAP pedagogues play noteworthy roles in implementing satisfying and gratifying instruction; one way to accomplish this is to cooperate and consult with major specialists or experienced language teachers. Among the consultant models suggested in educational settings co-teaching has received considerable attention in recent decades.

To address the academic needs of students, co-teaching has been widely used in educational settings (Friend & Bursuck, 2009; Magiera & Zigmond, 2005) from the 1960s in general education classrooms; but, during the previous decade it received due attention in ESP and EAP classrooms. To adopt Friend and Cook’s (2007) words, co-teaching refers to a situation that “two or more professionals jointly deliver substantive instruction to a diverse, blended group of students in a single physical space” (p. 113). Cook and Friend (1995) contented that in a co-teaching instruction the co-teachers work together, and deliver “substantive instruction” in the same classroom to a heterogeneous group of learners.

Implementing constructive co-teaching has central components. First, it requires both teachers to shoulder and share responsibilities, that is, the co-teachers possess the same responsibilities in the classroom and in delivering instruction. Murawski and Swanson (2001) emphasized that joint responsibility is a critical facet of implementing advantageous co-teaching. Moreover, cooperative planning is considered a principal element of delivering beneficial co-teaching (Dieker, 2001; Keefe & Moore, 2004; Walther-Thomas, 1997). Additionally, the teachers need to trust each other so as to deliver high quality instruction (Mastropieri, Scruggs, Graetz, Norland, Gardizi, & McDuffie, 2005; Walther-Thomas, 1997). Among the core elements in delivering co-teaching, preplanning has also been heavily stressed by leading experts (Mastropieri et al, 2005; Scruggs, Mastropieri, & McDuffie, 2007).

The chief aim of this study is practically implementing two models of co-teaching viz. Team Teaching and Station Teaching in an EAP situation in Iran to pursue its effectiveness in enhancing the efficacy of these two models. Furthermore, the efficiency of these models will be compared.

2. Literature Review

Co-teaching approach as a whole and its different models in particular has been investigated from various perspectives in different educational contexts. Exploring teachers’ perception about co-teaching has been one domain of research in the previous studies (Castro, 2007; Chapple, 2009; Daane, Beirne-Smith, & Latham, 2000; Mastropieri et al, 2005; Rice & Zigmond, 2000; Scruggs et al., 2007; Weiss, 2004; Zigmond, 2001). For instance, Foley and Mundschenk, (1997) explored the perceptions of general educators about co-teaching. The researchers reported that the co-teachers felt they lack adequate skills for collaboration.

Exploring the essentials and barriers of co-teaching has been another line for the previous qualitative studies. Vaughn, Schumm, and Arguelles (1997) stated that managing the classroom, enough space, well-communication, and planning time are requirements of co-teaching. Weiss and Brigham (2000) reviewed 23 co-teaching studies in the elementary and secondary levels. They identified the attitudes of the general education teacher, planning, mutual respect, administrative support, and behavior management as key elements of successful co-teaching. Dieker and Murawski (2003) referred to sufficient planning time, mastery of content by special education teacher as the requirements of co-teaching. Gately and Gately (2001) also referred to well-established communication, content knowledge, planning, teachers’ management, and assessment as the main components of effective co-teaching.

Murata (2002) also conducted a qualitative study utilizing interviews, observations, and students evolutions. The researcher referred to “teacher choice, curriculum-driven design, and administrative support” as the prerequisites of exercising constructive team-teaching. To him planning together is more essential than co-teaching; it is personally and professionally beneficial for the co-teachers.
Magiera, Smith, Zigmond, and Gebauer (2005) conducted a qualitative study to observe the mathematics co-taught classrooms. It was indicated that the special education teachers just provided the main teachers with supports by monitoring individual students. The researchers cited teachers training, planning time, and trust as the necessities of co-teaching. Tobin (2005) in a qualitative research gathered data using audiotapes, filled notes, and semi-structured interviews of one teach-one assist model of co-teaching. In this model the special education teacher supports the general education teacher. The results indicated that for implementing effective co-teaching, the instructors should cope with the obstacles of planning time and administrative support.

Murray (2004) in a three year study attempted to find the essentials of implementing effective co-teaching in ESP, when general education teachers collaborate with special education teachers. The general education teachers cited that they lacked training in working with the co-teachers. They also referred to limited source, time, and overrepresentation of disabled students as the barriers of exercising successful co-teaching.

Many studies have also explored the efficacy of co-teaching in classroom studies with different types of students. Magiera and Zigmond (2005) through classroom observations attempted to explore if an “additive effect” of instruction exists when the students are taught by only one general language teacher comparing to a situation that one general language teachers co-taught by a special education teacher. They found that when the special education teacher attended in the classroom, the other partner spent less time with disabled students. The students received more one-to-one instruction in the presence of two teachers; however, the students with disabilities did not significantly benefit from co-teaching. Dufour (2003) posited that the results of a successful collaboration classroom can be stronger than a single teacher classroom. However, teachers express concern about the efficacy of co-teaching (Dieker, 2001; Murawski & Swanson, 2001; Scruggs et al., 2007; Weiss, 2004).

On the other hand, Bean (2006) reported no significant difference in the students’ achievement and attitude when receiving co-teaching. However, the teachers maintained that co-teaching is beneficial for students’ social achievement. Murawski (2006) found no significant difference between the attainments of students with disabilities in four models of service delivery systems including co-teaching. Further Murawski (2006) stated that the teachers and students positive perception towards co-teaching supports the implementation of co-teaching.

Further, positive students’ outcomes in the classroom of students with disabilities have been reported in many studies (e.g. Bear & Proctor, 1990; Harris et al., 1987; Klingner, Vaughn, Hughes, Schuman, & Elbaum, 1998; Self, Benning, Marston, & Magnusson, 1991). Horn (2006) reported that the students’ understanding increases when facing with co-teaching.

Jordan (2011) designed a mixed-method study using the students’ math scores and data collected from observation checklists and structured interviews. The findings indicated that the disabled students who took part in inclusion classrooms showed progress as much as the ordinal students who attended in non-inclusion classrooms, in the third, fourth, and fifth grade classrooms. The researcher maintained that the co-teachers “must be willing to comprise, collaborate, and cooperative in order for co-teaching to be successful and to have an impact on student progress attainment” (p. VI). Packard, Hazeliaorn, Harris, and McLeod (2011) conducted a quasi-experimental study to explore the effectiveness of co-teaching on the achievement of disabled ninth grade students. The results revealed that the disabled students who received instruction in source classrooms outperformed those who were taught by co-teachers.

The literature shows numerous studies in the realm of co-teaching; however, some researchers contended that there is a lack of empirical investigation to explore the students’ outcomes in co-teaching classrooms (Murawski, 2006; Scruggs et al., 2007; Friend & Cook, 2010). There continues to be limited classroom research to probe the effectiveness of different models of co-teaching on students’ attainment. Thus, further research is needed to focus on the outcomes of the approach in EAP classrooms.
3. Rationales for the study

EAP has come to Iranian educational system from two decades ago, since then numerous books have been written and published to fulfill the learners’ needs; however, the techniques and procedures adopted in this situation are mainly traditional using only one teacher in the classroom. The increasing number of motivated students to continue education in the academic level in Iranian universities reflects the need to adopt effective and responsive instruction so as to properly address the students’ needs. One approach that has been widely exploited in previous decades in EAP contexts is co-teaching; however, to the best knowledge of the researchers no study has investigated its efficacy in Iran.

Ataie (2000) maintained that “the students generally acknowledge the priority of receptive skills over productive skills” in Iran (p. 199). Hayati (2008) also posited that receptive skills should be the focus of Iranian EAP classrooms. Therefore, the researchers were motivated to conduct a study to investigate the effectiveness of team teaching and station teaching on the students’ reading comprehension in an EAP situation in Iranian context. More particularly, the following research question is addressed in the study:
Does implementing team teaching and station teaching promote the students’ reading comprehension in an EAP context in Iran?

4. Method

4.1. Participants

The participants in the study were 52 sophomore students from Ilam University, Iran, majoring at business management aged from 20 to 28 years old. There were 17 students in the control group including 7 male and 10 female learners. Seventeen students, 9 male and 8 female, also constituted the first experimental group, who were taught through team teaching, and 18 students, including 12 male and 6 female, comprised the second experimental group who received instruction through station teaching. Furthermore, four experienced teachers delivered instruction to the experimental and control groups.

4.2. Instruments and Materials

Two tests were held during the study including one proficiency and one achievement test. The former was conducted as a pretest and the latter as a posttest. The pretest was taken to assign the students to the control and experimental groups, the posttest was also held to find the students’ achievement in the end of the study. The tests included 50 reading comprehension, grammar, structures and close tests with the time restriction of 90 minutes. The reliability of the tests was sought through test-retest technique, and the validity was proved through experts’ judgment. The main book of the study was “specialized English for management students (elementary): An introduction to principles of management (Venous, 2006)”.

4.3. Procedure

The study employed a quasi-experimental, pretest posttest, design comparing students’ achievement in two experimental and one control group over a 15 weeks period. Before the study began, the teachers were trained and became thoroughly familiar with six models of co-teaching (including, One teach, One observe; Station Teaching; Parallel Teaching; Alternative Teaching; Teaming; and One teach, One Assist). Then, upon the agreement of the teachers and experts, it was decided to adopt team teaching and station teaching among the presented models. To ensure the homogeneity of the students in the beginning of the study, One-way ANOVA was run to analyze the students’ achieved score in the pretest. After assigning the three sampled classes to two experimental and one control group, the students in the first experimental group were co-taught by team teaching, and those in the second group were also co-taught through station teaching model of co-teaching (the models were presented by Friend & Cook, 2007); while, the control group received instruction by a single instructor. The students of the two
experimental groups took part in the classes on Wednesdays and Tuesdays respectively, and the students of the control group attended in the classrooms on Saturdays for 1.5 hour in each session.

The students of the first experimental group (who received team teaching) were taught by a couple of teachers. Both teachers delivered instruction to the learners simultaneously, and were of equal authority in managing the classroom, grading, and so forth. The students of the second experimental group (who received station teaching) were also taught by two teachers, but the pedagogues delivered instructions in three stations. In the first station, the teacher taught the lessons to a small group of learners while another group of learners were receiving instructions in the second station. There was also another station for students to work independently. The first station was mainly designed to promote the students’ knowledge in English including grammar, vocabulary, and different techniques of critical reading such as how to find a topic sentence, what is a main idea and how to find it in a text and so on, while the focus of the second station was on enhancing the students’ knowledge about management. In the third station the students were asked to review the lessons. The teachers in this model also were of equal status in grading, managing and so forth. It is added that the students changed their stations every 30 minutes. It is worth noting that the methods, techniques of delivering instruction and teachers’ responsibilities were preplanned by the co-teachers before classes. Finally, a posttest was conducted to find the students’ attainment, and the results were analyzed through One-way ANOVA.

5. Results

Table 1, indicates and compares the mean and the standard deviation of the students’ achieved scores in the pretest and posttest.

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
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<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Solo-teaching</td>
<td>38.41</td>
<td>4.6</td>
</tr>
<tr>
<td>Team-teaching</td>
<td>36.59</td>
<td>4.4</td>
</tr>
<tr>
<td>Station Teaching</td>
<td>37.28</td>
<td>5.2</td>
</tr>
</tbody>
</table>

Table 2 reveals the inferential statistics of the students’ achieved scores in the pretest. The sig=.54 is higher than .05; therefore, it can safely be claimed that there was no meaningful difference between the students initial performance and the three groups were nearly homogeneous in the beginning of the study.

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>14.423</td>
<td>.623</td>
<td>.540</td>
</tr>
</tbody>
</table>

In the end of the study, all participants took part in a final achievement test. As it is shown in Table 1, the mean score of the students in the experimental group were higher than the control group. To see whether this difference was meaningful, One-way ANOVA was adopted. The sig=.013 in Table 3 indicates that there was significant difference between the students’ performance; therefore, post-hoc analysis was determined.

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>77.333</td>
<td>4.724</td>
<td>.013</td>
</tr>
</tbody>
</table>

The following table shows the results of the LSD analysis from One-way ANOVA.

\[ p<.05 \]
Table 4: The results of the Post-Hoc analysis from One-way ANOVA

<table>
<thead>
<tr>
<th>Group</th>
<th>(J) Group</th>
<th>Mean Difference (I-J)</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solo-teaching</td>
<td>Team-teaching</td>
<td>-3.529(*)</td>
<td>.014</td>
</tr>
<tr>
<td>Solo-teaching</td>
<td>Station Teaching</td>
<td>-3.801(*)</td>
<td>.008</td>
</tr>
<tr>
<td>Team-teaching</td>
<td>Station Teaching</td>
<td>-.271</td>
<td>.844</td>
</tr>
</tbody>
</table>

The sig=.014 in Table 4 shows that there was a meaningful difference between the students who were taught by a single teacher and those who received team-teaching. Regarding the average score of the students in the control group, M=37.59, and the mean score of the team-taught group, M= 41.12, it is crystallized that the latter outran in the posttest. The results of the post-hoc analysis, sig=.008, also showed that there was statistically significant difference between the final achieved scores of the control and the station teaching group (see Table 4). Comparison between the mean of control group, M=37.59, and the station teaching in the experimental group, M=41.39 made it clear that the experimental group outperformed the control group. However, the sig=.844 does not mark statistically meaningful difference between the students’ performance in the team-teaching and station teaching groups.

6. Discussion

The aim of this study was to discover the effectiveness of two models of co-teaching viz. team-teaching and station teaching. To this end, 52 students of Ilam University, Iran majoring at business management were chosen and based on the achieved scores in the pretest were assigned to three homogeneous groups, one control and two experimental groups. The students of the control group were taught by one teacher, the first experimental group received instruction by a couple of teachers through team teaching model, and the second experimental group were taught by station model of teaching presented by Friend and Cook (2007). The upshots of the study indicated that exploiting co-teaching was beneficial in the promotion of the students reading comprehension.

In the following lines, the results will be discussed at length. Before that; however, the findings are summarized as follows:

According to Table 4, it is clear that the adopted treatments in the experimental groups were effective in the promotion of the students reading comprehension. However, there was not much mean difference between the students’ scores who received instruction by team-teaching and those who were taught through station teaching. Generally, the findings of the current study are in line with the findings of many studies (Bacharach, Dahlberg, & Heck, 2006; Fennick, 2001; Horn, 2006).

Another point in the study is relevant to the standard deviation of the scores. The standard deviation of the scores from the control group was SD=4.6 in the pretest and SD=4.31 in the posttest. Little change was reflected in the standard deviation of the scores in the control group. The same statistics for the team taught group was 4.4 in the pretest that reduced to 3.23 in the posttest. Similarly, regarding the station taught group, SD was 5.2 in the pretest that decreased to 4.25 in the final test. Thus, it can be concluded that implementing the adopted models of co-teaching in the EAP context in Iran considerably reduces the standard deviation of the scores. Put it differently, the students of the experimental groups were more homogeneous in the end of the semester.

One interpretation that can be put on the findings of this study is that the instructors devote much time on delivering instructions and less time is wasted when two teachers attend in a single classroom. One explanation for the successfulness of station teaching can be the distinctiveness of the stations. Central point can be covered in each station, for instance one station might be devoted to teach grammar and structure when specific points of management are practiced in the other station. In the third station the students can review the lessons. This can increase the students’ and teachers’ concentration. Moreover, one third of all of the students in a single classroom attend in each station that allows the teachers to analyze and respond the individual needs of students. In the team-
teaching model also two instructors simultaneously observe the students and analyze their needs that can help them in properly fulfilling the academic needs of the learners.

Qualified experts and researchers recommended and emphasized on teachers training before implementing co-teaching (Dieker & Murawski, 2003; Foley & Mundschenk, 1997; Gately & Gately, 2005); many studies have failed to prove the efficacy of different models of co-teaching (Bean, 2006; Murawski & Swanson, 2004; Reinhiller, 1996; Welch, Brownell, & Sheridan, 1999) among the reasons of non-efficacy of this approach is the lack of teacher training (e.g. Murawski, 2006); thus, one reason of the accomplishment of the exploited models in this study can be related to the training of the instructors. All instructors were thoroughly familiar with co-teaching and different models of it. Bouck (2007), Magiera et al. (2005), and Tobin (2005) also suggested planning as an essential of implementing successful co-teaching. So, teachers’ planning can be another reason of the successfulness of the models in this study.

7. Conclusion

As indicated in the results, there was considerable difference between the students’ performance in the control and experimental groups. Comparing the mean scores, it was indicated that team taught and the station taught groups outperformed the control group. Consequently, it can be concluded that employing team teaching and station teaching conveyed meaningful and positive effect on the promotion of EAP students in Iran.

The results of this study have implications for administrators, faculty members, EAP teachers, and researchers. It is hoped that the positive outcomes of the current study motivate the administrators to adopt team teaching and station teaching in EAP classrooms so as to enhance the students’ achievement in the realm of reading comprehension. Teacher training was found as an influential factor in effectively implementing co-teaching; thus, the faculty members should give teacher training a priority when conducting co-teaching classrooms. Another key factor in exploiting effective co-teaching was teacher planning; so, the committed instructors who are willing to adopt co-teaching in EAP classrooms should take planning and preplanning into consideration. Finally, the researchers can make benefit of this study by trying to discover the reasons of co-teaching efficacy in order to improve the EAP courses in Iranian universities.

Like the majority of studies few limitations are inherent in this study. The results of the current study suffered from the small number of participants; by adding more student and teacher participants more reliable insights could be found. Furthermore, this study was limited to the students of business management; future researchers can replicate the current study, utilizing the same design, in other universities and using students of other majors. This study did not take the students’ gender into account, further studies can be conducted to see whether male and female learners gain differently when receiving co-teaching. Employing different models of co-teaching can also be another line for interested researchers.

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