



Incorporating Collaborative Teaching in Student-Teacher Education

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Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

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ABSTRACT

The aim of this study was to investigate the effect of collaborative teaching on student teachers' education and how it could be used to improve the teaching practice experience. The design of the study was experimental. The sample of the study was 30 senior students in the Applied Linguistics Department. They were divided into a control group (15 students) who used the traditional teaching practice model and an experimental group (15 students) who used the collaborative teaching model. Their performance was observed before and after the experimental treatment. The results of the study showed that collaborative teaching was more effective in developing students' teachers professionally.

Keywords: Collaborative teaching; student-teacher education.

1. INTRODUCTION

Teacher Education Programs face many challenges. The most important one is how to maintain high quality instruction to large classes

having heterogeneous students. Teacher Education Programs are still sticking to the usual individualistic pattern that stresses teacher isolation and self-containment.

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It became necessary to change this pattern and replace it with the one that focuses on collaboration instead of isolation. Collaboration can have powerful effects on student learning, particularly for low-achieving students. Collaborative teaching is a teaching method by a group of teachers. Collaborative teaching is emerging as an innovative and very effective approach in various disciplines including Teaching English as a Foreign Language (EFL). It can help both teachers and students in the foreign language classroom. It maximizes students' learning when exposed to the various teaching styles and techniques of the cooperating teachers. It also stimulates students. It helps teachers who work in a team to benefit from each other, cooperate, coordinate and share the responsibilities of planning, implementation, and evaluation.

Collaborative teaching helps student-teachers have a real experience not artificial like that provided by the micro-teaching experience. It helps student-teachers in their teaching practice as it "allows students to collaborate in planning in early stages, it lessens the initial stress factor for trainees, it allows trainees to focus on one's pedagogic aspect at a time and aids in promoting understanding of lesson structures". Team Teaching is a common term that describes a technique to teach a course with more than one teacher. This technique shifts the role of teaching from an individual to a team with the aim of improving the quality of teaching and learning. Dividing the lesson into stages and more manageable parts allows student-teachers to focus on each part and give it more attention. This also gives them the chance to have less work load and it enriches their teaching practice. Collaborative teaching allows student-teachers to work together, cooperate in planning lessons and coordinating teaching responsibilities. By exchanging skills and ideas, they develop in areas where they may not be efficient. This develops their academic, professional, and social growth. Effective collaborative teaching requires training. Student teachers as prospective teachers of English as a Foreign Language (EFL) should be familiarized with collaborative teaching and its benefits to be able to use it in their teaching practice and in their future teaching [1].

1.1 Purpose of the Study

The present study attempts to investigate the effect of collaborative teaching on enhancing

students-teachers' performance in the classroom.

1.2 Significance of the Study

The study aims at familiarizing student-teachers with collaborative teaching as a new method and helping them use it in their teaching practice as well as future teaching. It helps to maximize student-teachers' achievement and learning as they are exposed to different perspectives and styles of teaching.

1.3 Hypotheses of the Study

The study attempted to test the following hypotheses:

1. There are no significant differences between mean scores obtained by the subjects of the control group and the experimental group on classroom performance before incorporating collaborative teaching.
2. There are significant differences between mean scores obtained by the subjects of the control group and the experimental group on classroom performance after incorporating collaborative teaching.
3. There are significant differences between mean scores obtained by the subjects of the experimental group on classroom performance before and after incorporating collaborative teaching.

1.4 Statement of the Problem

The present study attempts to investigate the effect of using collaborative teaching on student teachers' education.

2. LITERATURE REVIEW

2.1 Collaborative Team Teaching

Collaborative teaching research has identified successful methods of implementing collaborative teaching within their classrooms [2]. Consequently, collaborative teaching has been met with considerable support from schools as a successful instructional method incorporating partnerships among general and special educators to meet the needs of special education students [3].

Collaborative learning is defined as “a situation in which two or more people learn or attempt to learn something together,” and more specifically as joint problem solving [4].

Collaboration was defined more specifically as “mutual engagement of participants in a coordinated effort to solve a problem together,” [5].

“Collaborative teaching is a developmental process that involves open communication and interaction, mutual admiration, and compromise” [6]. In short, Collaborative teaching requires a commitment to the evolution of the collaborative process [7].

“Collaborative teaching is defined as two or more teachers working together with groups of students, sharing the planning, organization, delivery, and assessment of instruction as well as the assessment of instruction as well as the physical classroom space” [8].

“Collaborative Team Teaching (CTT) increases educational opportunities for all students. It can reduce the stigma often associated with being identified as having a disability. It creates a stronger system of support for effective instruction among the adults responsible for educating students” [9].

The term Collaborative teaching is used in the present study to refer to the collaboration of three student- teachers in planning and sharing the responsibilities of teaching a given period; each one part or stage of the lesson to intermediate school students.

2.2 Types and Models of Co-teaching

Collaborative teaching is typically implemented using one of the following six models:

2.2.1 One teach, one observe

In this model, one teacher teaches while the other teacher observes students to identify problems and evaluate their performance. This method allows the observing teacher to give feedback on which activities are most effective for students, allowing the other teachers to improve their practice to meet the needs of all students in their classroom.

2.2.2 One teach, one drift

This model is similar to the ‘One Teaches, One Observes’ model, but in this model, one teacher is teaching the classroom and the other teacher provides additional help and support to students as needed.

2.2.3 Station teaching

With this model, the lesson is divided into small parts as the teachers each teach one part of the lesson at independent stations or rotate between groups of students. This allows teachers to give special support when delivering the lesson in areas they have more experience in.

2.2.4 Parallel teaching

In the parallel teaching model, the teachers divide the class into two groups and they teach each group with the same content simultaneously. The smaller groups allow closer supervision and more opportunities for interaction between the students and teacher.

2.2.5 Alternate teaching

In this model, one teacher handles a larger group of students, while the other teaches a small group who need specialized attention and additional support.

2.2.6 Team teaching

With team teaching model, the co-teachers share responsibility and teach at the same time as a “tag team [10].

2.3 Previous Studies in the Literature

The key components necessary to create effective co-teaching relationships and environments was investigated. Teacher collaboration and co-teaching as evidenced in literature were considered. The findings lead to the identification of eight key components required to create effective collaborative teaching and learning environments which are discussed using three themes of student centeredness, effective pedagogy and collaboration. Recommendations were provided to support the effective co-teaching in a flexible learning space such as, situating learners at the center, developing skills of collaboration and analyzing the impact of co-teaching strategies [11].

The advantages that are attained when a collaborative teacher (CT) co-teaches with a student teacher (ST) was discussed. The advantages include enhancing instructional support for children in the classroom, maximizing the time the ST spends "teaching", energizing classroom teachers through supportive mentoring relationships with their collaborative teaching STs, heightening CT's awareness of the newest instructional strategies and their impact through ongoing conversations with STs about planning and lesson implementation and offering continuous mentoring opportunities rather than only those during isolated lessons [12].

Goetz [13] cites the following advantages: "it gives the participating team teacher a supportive environment, allows for development of new teaching approaches, aids in overcoming academic isolation, increases the likelihood of sounder solutions regarding the discipline of problematic students and augments the opportunity for intellectual growth".

Teacher collaboration occurs in situations where teachers work together in a coordinated way to achieve common goals. A useful continuum of collaboration was provided from, "Scanning and storytelling (exchange of ideas, anecdotes and gossip), to help and assistance, to sharing (of materials and teaching strategies), to joint work where teachers teach, plan or inquire into teaching together". This 'joint work' has significant benefit for teachers and students with teaching focusing on work that has the potential to improve student outcomes, well-being and self-regulation [14].

Collaborative teaching occurs when two or more teachers share responsibility for a group of students, usually within one workspace, through a shared approach that includes the pooling of resources and joint accountability. One of the two teachers' is typically a general education teacher with the second teacher a registered special education teacher. Collaborative teaching can be traced to the early 1960's when special education students were first 'included' in mainstream classes [15]. By the 1990's emerging research evidenced benefits for special needs students in inclusive classrooms together with teachers reporting professional growth and an improved sense of collegiality [16].

A successful collaborative program that paired college faculty with high school teachers was

described. The program had three major goals: (1) to facilitate pedagogical cooperation between college foreign language and literature faculty and local middle school and high school teachers, (2) to improve articulation between secondary and postsecondary foreign language curricula, and (3) to develop the communicative skills of students, particularly speaking and listening, despite increased class sizes. The partners in the program pointed out the value of cooperation in stimulating students and promoting professional growth. In addition, teachers reported benefiting from discussing pedagogical issues with colleagues from other secondary schools as well as with college faculty [17].

It is believed that collaborative teaching can provide teachers more opportunities to get involved, overcoming teaching difficulties, stimulating the growth of professional knowledge and abilities and learning from each other. In addition, integrated teaching activities could bring up students' interest, so they could start further discussions on certain topics, to achieve learning goals and to help them create a more pluralistic space. The key factors of collaborative teaching's success are teachers' experiences, personalities, working styles and attitudes toward learning [18].

A collaborative teaching model was incorporated into a selected "introduction to design" course in order to explore its influences on students' learning effectiveness. The research subjects were selected from a polytechnic university in central Taiwan, and included 59 freshmen from the commercial design department and 57 from the spatial design department. After detailed analysis, the following conclusions have been drawn: (1) none of the pre-test results for any of the units in the professional theory have reached a significant level for students from either department. This means their pre-requisite knowledge for the introduction to design course is homogeneous. (2) The incorporation of a collaborative teaching model can improve students' learning effectiveness. (3) The students from the commercial design department have greater improvement in learning effectiveness than those from the spatial design department. (4) Both the teachers and the students showed a positive attitude towards the incorporation of the collaborative teaching model [19].

The effect of collaborative teaching on the learning process was investigated. To do so, a

group of 58 first-grade students was assigned to two classes. In one group, learners received grammar instruction from co-teachers, while in the other group grammar instruction was delivered by a single teacher. The findings revealed that the difference in method of grammar instruction did not lead to a significant difference in the participants' performance. This finding implies that the appropriateness of collaborative teaching in educational systems, at least for teaching grammar in a teaching English as a foreign language context, is doubtful, and that collaborative teaching classes should be used cautiously [20].

Duran and Miquel [21] differentiated between two types of collaboration that can be found in classrooms: Peer collaboration and teacher collaboration. The first focuses on how the teacher restructures interactions between students organized in pairs or groups. This allows cooperative learning practices, either by peer teaching or through cooperative learning. By implementing peer collaboration, the teacher develops a new role which facilitates continuous assessment, which is more difficult to be implemented in the traditional teaching environment. However, both the organization of the classroom for peer collaboration and this new teaching role require teacher training. There are different levels of teacher collaboration, but the most complete is co-teaching: two teachers planning, implementing, and assessing the same lesson for a group of students. Co-teaching allows teachers to know the individual needs of their students. Furthermore, it is a learning tool for teachers. Co-teachers can have mutual observation, reflection, and planning of new practices, making working together a kind of professional development. However, to ensure that students receive better attention and that teachers learn from each other, there has to be teacher training, and it must be addressed from an experimental perspective.

A collaborative teaching approach (CTA) between two instructors was implemented to develop more curricular coherence to stimulate learning across mathematics methods and instructional technology courses. The CTA was used to achieve the learning outcomes. A case study approach was used to determine preservice teachers' levels of satisfaction. They expressed an overall satisfaction with the learning outcomes of the collaboration, and they suggested extended implementation [22].

3. METHODOLOGY

3.1 Research Design

The present study used an experimental research design. Participants were divided into two groups, an experimental and a control group. The experimental group used collaborative teaching and the control group used the usual teaching practice.

3.2 Population and Sample of the Study

The participants of the study were 30 senior students in the Applied Linguistics Department. They were divided into a control group (15 students) and an experimental group (15 students). They were all having their practicum course in the academic year 2013.

3.3 Procedures for Collecting the Data

1. Observing the teaching performance of both the experimental and the control group before the treatment. Each student-teacher was observed while teaching an entire class. An observation checklist designed by the researcher was used.
2. Sessions for raising student-teacher's awareness about the use of collaborative teaching as a new method of teaching were given to the experimental group. Models of collaborative teaching and how to incorporate them in teaching were explained.
3. The experimental group students were divided into five groups of three student-teachers. Each student was assigned a role in a stage of the lesson. Each group was given instructions to exchange the role to make sure that each one has taught three times, each time a different stage of the lesson.
4. Student-teachers' implementation of the idea of collaborative teaching was checked. As one student-teacher was giving a warm up stage of the new lesson, the other student-teachers were checking students' assignments. In another stage while one student-teacher was presenting the new lesson, another student-teacher was guiding students in their practice, and a third one was giving the concluding summary of the lesson and evaluating their progress.

5. Post collaborative teaching sessions were given to student teachers on the co-teaching experience.
6. For the control group, student-teachers used the traditional teaching practice in which each student-teacher was teaching the whole class period individually.
7. Both the experimental and the control group student-teachers were observed.

differences between the two groups, which proved the first hypothesis as shown in Table 1.

As shown in Table 1, the mean score of the control was 17.56 with a standard deviation of 1.31. Comparing it to the mean score of the experimental group that was 17.50 and standard deviation of 1.33 proves that both groups have similar performance before the treatment.

3.4 Research Instrument

An observation sheet was prepared by the researcher to observe student-teachers teaching performance. It contains three sections to measure student-teachers' performance in: Presentation, practice, and production.

4.1.2 Testing the second hypothesis

Hypothesis 2: "There are statistically significant differences between mean scores obtained by the subjects of the control group and the experimental group on classroom performance after incorporating collaborative teaching".

The mean scores of the control group and experimental group on their class performance skills before the experiment were calculated and tabulated. Results showed significant differences between the two groups, which proved the second hypothesis as shown in Table 2.

4. RESULTS AND DISCUSSION

This part deals with data that were discussed and interpreted in relation to the hypotheses of the study.

4.1 Results of the Study

4.1.1 Testing the first hypothesis

Hypothesis 1: "There is no statistically significant difference between mean scores obtained by the subjects of the control group and the experimental group on classroom performance after incorporating collaborative teaching".

The mean scores of the control group and experimental group on their class performance skills before the experiment were calculated and tabulated. A t-test formula for the correlated scores was used to calculate the differences statistically. Results showed no significant

The results shown in Table 2 indicate that there are significant differences between the control and the experimental group after incorporating collaborative teaching in favor of the experimental group with mean scores of 26.30 and standard deviation of 2.18. It became clear that there are differences between the control and the experimental groups in favor of the experimental group. The experimental group who incorporated collaborative teaching outperformed the control group who used the traditional teaching practice with one students- teacher per class. Their performance improved and they mastered the teaching skills due to using collaborative teaching models. This remarkable progress shown by the study subjects after the treatment was due to incorporating collaborative teaching.

Table 1. Means and standard deviation of scores of subjects of the control group, experimental group on the observation checklist before treatment

Group	Number of students	Mean score	Standard deviation	T	P
Control	15	17.56	1.31	0.22	Not Sig.
Experimental	15	17.50	1.33		

Table 2. Means and standard deviation of scores of subjects of the control group and experimental group on the observation checklist after treatment

Group	Number of students	Mean score	Standard deviation	T	P
Control	15	21.50	2.61	6.83	0.01*
Experimental	15	26.30	2.18		

Table 3. Means and standard deviation of scores of subjects of the experimental group on the observation checklist before and after treatment

Number of students	Mean scores	Standard deviation	t-value	P	
15	Pre-treatment	17.50	1.33	17.35	*S
	Post-treatment	26.30	2.18		

* $P < 0.01$

4.1.3 Testing the third hypothesis

Hypothesis 3: “There are statistically significant differences between mean scores obtained by the subjects of the experimental group on classroom performance before and after incorporating collaborative teaching”.

The mean scores of the experimental group on their class performance skills before and after the experiment were calculated and tabulated. Results showed significant differences between the pre and post treatment performance, which proved the third hypothesis as shown in Table 3.

The results shown in Table 3 indicate a statistically significant difference between mean scores of the pre-post treatment of the experimental group favoring the post treatment scores.

5. CONCLUSION

The results of the present study made it clear that Collaborative teaching method was effective in improving student-teachers' classroom performance skills. Collaborative teaching experience was beneficial in helping them develop collaborative skills while working with their peers. This would indicate the Collaborative teaching models were helpful in improving their abilities to collaborate in ways that helped improve their teaching practice. With the use of Collaborative teaching, student-teachers became more proficient in their teaching performance than their counterparts who used the conventional teaching methods. The results are consistent with other studies findings especially those of Rosaen [23], Lee [17] and [24].

The results of the present study contradict those of Alikbari and Nejad (2013) that showed that co-taught students did not outperform the students who received traditional methods of teaching in the ELT context. In other words, the Collaborative teaching model did not contribute to better results in the grammatical proficiency than did the single instruction approach.

Therefore, it might be argued that the model of Collaborative teaching used is not suitable to be implemented in every educational system in teaching grammar points [20].

6. RECOMMENDATIONS

The following recommendations are presented based on the study findings and conclusions.

- Pre-service or in-service training helps teachers to understand how to collaborate or communicate effectively with colleagues or how to develop inter-personal skills.
- Teachers should learn how to create learning focused communication and develop the skills to communicate effectively with colleagues to best meet students' needs.
- Educational administrators should provide co-teachers with professional development activities that offer instruction related to effective co-planning; Collaborative teaching variation and models; student scheduling; and interpersonal communication.
- Co-teachers should be given the chance to select their Collaborative teaching partners. Teachers who co-teach need to have opportunity to develop personal compatibility with their partner teacher.

CONSENT AND ETHICAL APPROVAL

As per international standard or university standard guideline participant consent and ethical approval has been collected and preserved by the authors.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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