

**Symantec Review of Collaborative Learning Strategy, Jigsaw and Peer  
Tutoring Techniques on Student-Teachers' Teaching Performance****Researcher. Ola Falah Hassen****University of Babylon\ College of Basic Education****Prof. Dr. Chassib Fanukh Abbas**[chassib@elearning.abu.edu.iq](mailto:chassib@elearning.abu.edu.iq)**Ministry of Education\ Open Educational College****أثر استعمال استراتيجيات CLS وطريقتي الـ (Jigsaw) و (Peer – Tutoring) في الأداء التدريسي****للطالبة المطبقين اللغة الانجليزية لغة أجنبية واتجاهاتهم نحو التدريس****أ.د. جاسب فنوخ عباس الجبوري****الباحثة. علا فلاح حسن****الكلية التربوية المفتوحة / وزارة التربية****جامعة بابل / كلية التربية الأساسية****الملخص**

تتحدث الدراسة عن أهمية تحديث طرائق التدريس كجزء أساسي من عملية التعليم، حيث يُعتبر التدريس الفعال مسألة نفسية تتطلب من المعلمين التصرف وفق توجهاتهم. يعتمد نوع التعليم الذي يقدمه المعلمون على سلوكياتهم داخل الصف، مما يستدعي تحسين إعداد المعلمين لضمان نجاح الطلاب في المستقبل. تهدف الدراسة إلى تقييم تأثير استراتيجيات التدريس المختلفة، وهي: الاستراتيجية التجميعية (CLS)، أسلوب Jigsaw، وأسلوب التعليم المتناظر (Peer-Tutoring)، على أداء طلبة اللغة الإنجليزية كلغة أجنبية. كما تسعى إلى معرفة الفروق بين هذه الاستراتيجيات في الأداء التدريسي.

تم تطبيق تصميم تجريبي مع اختبار قبلي وبعدي على عينة مكونة من ١٥٥ طالبًا وطالبة من كلية التربية بجامعة ميسان خلال العام الدراسي ٢٠٢٤-٢٠٢٥. تم تقسيم المشاركين إلى ثلاث مجموعات تجريبية ومجموعة ضابطة. وضعت الدراسة فرضيات صفرية تفيد بعدم وجود فروق ذات دلالة إحصائية بين المجموعات. استمرت التجربة لمدة ثلاثة أشهر ونصف، وتم تصميم ثلاث خطط دراسية لاستراتيجيات CLS، Jigsaw، و Peer-Tutoring استخدمت الباحثة أدوات لجمع البيانات، بما في ذلك استمارة ملاحظة لأداء الطلبة. بعد انتهاء التجربة، توصلت الباحثة إلى مجموعة من النتائج الهامة التي تم ذكرها في نهاية البحث، مما يعكس تأثير هذه الاستراتيجيات على تحسين الأداء التدريسي.

**الكلمات المفتاحية:** إستراتيجية التعاونية، الأداء التدريسي، طريقة الجيكسو (Jigsaw)، التعليم بالأقران، التقنيات.

**ABSTRACT**

This paper emphasizes the necessity for teachers to regularly update their teaching methods as part of their professional development, highlighting that effective teaching relies more on psychological factors than on pedagogy. Teachers' beliefs and actions

significantly influence educational outcomes, making it essential to prepare future educators effectively.

The research aims to explore the impact of collaborative learning strategies (CLS), Jigsaw, and peer tutoring on the teaching effectiveness of EFL (English as a Foreign Language) student teachers. It involves 155 student teachers from the College of Education in Misan, using a non-randomized control group pre-test and post-test design. The study establishes three key hypotheses regarding the teaching performance of different groups.

The findings reveal that:

1. The group taught with CLS significantly outperformed the control group using traditional methods.
2. The Jigsaw technique also resulted in significantly better teaching performance compared to the control group.
3. Similarly, the peer tutoring group showed significant performance improvements over the control group.

To support the study, lesson plans incorporating CLS, Jigsaw, and peer tutoring were developed, alongside an observation checklist for assessing teaching performance. The research was conducted over three months, with formal instructors guiding the four study groups. The statistical analysis confirmed that innovative teaching strategies lead to improved outcomes, underscoring the importance of collaborative approaches in teacher training.

**Keywords:** Collaborative Strategy, Teaching Performance, Jigsaw, Peer-tutoring. Techniques.

## 1. The Problem and its Significance

Today's civilization is undergoing rapid change. These changes have a significant impact on education and schools. Information and communication technology is the cause of one change. As a result, the demands placed on educators have changed. Unquestionably, teachers today are expected to possess the information, abilities, dedication, and attitudes necessary to instruct a diverse group of students with a diversity of personalities and behaviours (Slogoski,2007).

Teachers are seen as essential to the success of this shift and as the driving force behind the establishment of schools where the majority of pupils may meet higher requirements through active learning. Everyone agrees that student learning is significantly impacted by the quality of the teacher.

The future success of students' EFL learning greatly depends on the effective preparation of preservice EFL teachers. Unless preservice EFL teachers are trained how to teach effectively, their training has minimal impact (Cohen et al., 2004)

Accordingly, it is important for EFL student teachers to experience a high quality pre-service training in order to be successful in their professional future lives. This is because teachers gain an important part of their teaching competencies during their

undergraduate studies. During this period, preservice teachers do not only gain the basic professional skills, but also develop certain attitudes pertaining to the profession. Therefore, the education given to preservice teachers should allow them to develop positions attitudes towards teaching as well as improve themselves in their subject field (Tenjoh-Okwen,2003)

The researchers, among other Iraqi EFL college instructors who oversee the teaching practices of EFL student teachers, have witnessed the ineffective teaching performance of aspiring teachers as a result of their incapacity to connect their theoretical knowledge with their practical experience. This could suggest that college training programming is not keeping up with the evolving nature of EFL instruction or the evolving EFL curriculum in secondary schools. The use of conventional methods for training and instructing student teachers may be one factor contributing to training programmes' incapacity to generate qualified, competent, and well-prepared instructors. Therefore, integrating as many diverse methods as feasible may be necessary to enhance the improvement of EFL student instructors' teaching performance.

According to Johnson and Johnson (2002), collaborative learning is one of the cutting-edge teaching techniques that can enhance instruction in general. It is an effective method of education. Additionally, it is a philosophical worldview and an effective education. Furthermore, Harmer (2007) highlights how teaching should be conceptualized in relation to collaboration. In his opinion, education is more than just imparting knowledge to pupils; it is also about fostering an environment where students can learn on their own.

In order to do this, the current study tests Jigsaw and peer-tutoring methodologies as well as the collaborative learning strategy as preservice EFL teacher training methods. In this regard, collaborative learning in particular is recommended not only due to the strong body of research supporting it, but also because it is completely compatible with other prominent best practices that are currently in use, like hands-on learning, differentiated instruction, and authentic assessment (Cohen et al., 2004)

The primary focus of this study is how to better prepare EFL student teachers by offering efficient training methods that enable them to instruct in increasingly difficult ways. EFL teachers must have the necessary education, training, and professional development in order to be effective in their roles. They must also be instilled with a positive outlook that will help them face the challenges that lie ahead.

## 2. The Aims

The present study's objectives are :

1. determining how the teaching effectiveness of EFL student teachers is affected by the use of collaborative learning strategies (CLS)
2. determining how the performance of EFL student teachers is affected by the use of Jigsaw and peer-tutoring technique.

3. determining how the teaching performance of EFL student teachers is affected differently by CLS, Jigsaw, and peer-tutoring strategie.

### 3. Hypotheses

The following three null hypotheses have been developed in order to accomplish the study's aims:

1. The mean scores of the first experimental group, which was taught using a collaborative learning strategy, and the control group, which was taught using a traditional technique, did not differ statistically significantly in their performance as teachers.
2. The second experimental group's mean scores in their teaching performance, which were taught using Jigsaw and Peer-tutoring methodologies, do not differ statistically significantly from the control group's mean scores.
3. The mean scores of the first and second experimental groups for their teaching performance do not differ in any way that is statistically significant.

### 4. Limits

This study is limited to:

1. the training of EFL student teachers through the use of Jigsaw, CLS, and peer-tutoring methodologies.
2. fourth-year English as Foreign Language (EFL) students at Misan University's, College of Education.
- 3- 2024-2025 is the academic year .

### 5. Value

The following may benefit from the study :

1. Both are necessary, including EFL college professors generally and those in charge of teaching practice courses specifically:
  - A- to shift their perspective from one that sees teaching as static and governed by straightforward principles to one that sees it as dynamic and always evolving. In order to meet the demanding needs of teaching, innovative methods and strategies that genuinely engage students in their learning must be employed.
  - B- The significance of student teachers' teaching dispositions should not be understated. According to the literature, these attitudes are very important in deciding how instruction is implemented and how well it is.
2. Both aspiring and experienced educators. By using the current study as a foundational book for a skill-oriented course with a practical skill focus, they can improve their teaching abilities.

### 6. Definitions of Basic Terms

#### 6.1. Strategy

Ornstein (1999:57) defines a strategy as the way a teacher actually presents the lesson topic, or how they impart knowledge to their students:

According to Moore (2007:148), strategy is the all-encompassing method of instructing a specific course. It is composed of two parts: processes and methods. The methodology is made up of specific procedures that the teacher uses to impact learning,

such as patterned behaviors. The process is the series of actions intended to help students achieve the learning goals. This study uses Moore's definition operationally.

## 6.2. Collaborative learning

Collaborative learning is a teaching strategy where students cooperate in groups to accomplish shared learning objectives. It entails learners' joint engagement, shared responsibility, and active participation. This approach develops social skills, communication, critical thinking, and problem-solving abilities

## 6.3 The jigsaw

This method involves students working in small groups to become "experts" on various aspects of a subject before sharing what they have learnt with their peers. This encourages participation, teamwork, and a more thorough comprehension of the subject matter .

## 6.4. Peer tutoring

Under the supervision of a teacher or facilitator, students teach and learn from one another. It improves self-esteem, social skills, and academic performance by creating a supportive learning atmosphere and offering individualised support.

## 6.5 Teaching Performance

Teachers should be able to exhibit a combination of knowledge, abilities, and responsibilities known as teaching performance in an educational setting (National Institute for Excellence in Teaching, 2011)

The ability of teachers to organise, carry out, and evaluate instruction in real classroom environments is known as teaching performance. (Public School, Florida, 2013)

Operationally, teaching performance is the real display of the knowledge and abilities required for teaching by student teachers. It is the level of performance required of student instructors in order to be deemed to have fulfilled the requirements for teaching performance.

## 6.6. Student Teachers

Under the supervision of a qualified, licensed teacher, the student teacher is a "student of teaching" completing the university's professional education programmed (Florida Public School, 2013)

According to Al-Khafaji (1999), a student teacher is a college student who is learning how to teach in a real-world setting while being supervised by a more experienced teacher or other certified operationally, college students who must fulfil the requirements of teaching performance under the supervision of a certified teacher are referred to as student teachers.

## 7. Theoretical Background and Literature Review

### 7.1. Collaborative Learning

An instructional strategy known as "collaborative learning" makes extensive use of group projects and pair and small-group learning activities in the classroom. Because each learner is held responsible for their own learning and is encouraged to improve the learning of others, these group learning activities are designed to make learning reliant on the socially structured exchange of information between students in groups (Richards & Rodgers, 2001)

Through collaborative learning, all students can work together in groups, each assuming the roles of both teacher and student while modelling respect and acknowledgement of a wide range of abilities and learning preferences. It promotes learning between students with different skills and aptitudes (Marr, 1997). It works well to satisfy the social and intellectual needs of students who are at risk of failing their education as well as to lessen prejudice among students. Every student must study and work in settings that acknowledge and meet their unique needs and strengths (Cohenetal.,2004)

Learner-centered traits are involved students share information and support one another as they collaborate in groups or pairs. According to Brown (2001), they are comparable to a football team whose members must cooperate in order to score goals. A learning environment that encourages students to actively engage in and contribute to the creation of their own learning experiences is offered by student-centered approaches to instruction (Moore, 2007)

The Humanistic Approach to language teaching was the first to emphasize the idea of learner-centeredness. Learner-centeredness has benefited from two contributions from the Humanistic Approach. First, it places a strong emphasis on teaching language in accordance with students' individual concerns. Second, it motivates students to actively and successfully participate in their own education (Larsen-Freeman, 2000)

The ability of students to collaborate with one another fosters a learning environment where students feel less stressed and are more motivated (Richards and Rodgers, 2001). The phrase "learner-centered instruction" refers to both particular methods and curricula. It is comparable to teacher-centered methods. It comprises methods that focus on or take into account the needs and goals of learners, methods that allow for students' creativity and innovation, and methods that give students some control (e.g., strategy training or group work) (Brown, 2001). Collaborative learning is essentially a paradigm change in education from a teacher-centered approach to one that is more student-centered.

The collaborative learning model known as the "Keep it Flowing Model" is seen in Figure (1). The teaching and learning model depicted in this picture highlights how interdependence and accountability must coexist in order for learning to occur. It

demonstrates how knowledge is shared not just between students and teachers but also between students themselves (Johnson and Johnson, 2004).

## 7.2 Collaborative Learning Strategies

There are five main models of collaborative learning :

De Vrie's Teams and Aronson's Jigsaw method, Slavin's Student-Teams Achievement, Game Tournaments division, Johson's Learning Together Model, and Shrran's Small-Group Teaching.

Students using the Jigsaw approach are divided into small, diverse groups. The learning assignment or material is divided into as many sections as there are people in the group. Only a portion of the entire content is learnt by each student, who is also in charge of instructing his fellow group members. It is the responsibility of every group member to learn all the information that will be tested, though (Blaney, Stephan, Rosenfield, Aronson, and Sikes 1977 in Sharan 1980)

As a result, "it entails less interdependence than Jigsaw I" (Slavin 1980), Slavin created a variation of Jigsaw called Jigsaw II, in which team results are transferred to quiz scores .

The two main pillars of Teams-Games-Tournaments (TGT) are an instrumental tournament and a group of four to five students. The process used to assign the students to groups takes into account their differences in ability, sex, and race. The group's purpose is to prepare its members by having them rehearse, study, and test one another on the material that the teacher has provided. (Sharan, 1980)

Learning occurs through cooperative group inquiry, debate, and data collection by the students in Sharan's Small-Group Teaching (SGT), a basic classroom technique. The students formed small groups of two to six people after choosing subtopics within a broad topic that the teacher had chosen. In order to prepare for a group presentation to the entire class, these groups further break down their topic into individual tasks that each group member must complete. This group presentation is the evaluated by the other students and by the teacher (Slavin, 1980)

Positive interdependence, individual accountability, constructive engagement, social and collaborative skills, and group processing are the tenets of Johnson and Johnson's Learning Together (LT) Model, which structures education. Compared to TGT, LT, and SGT models, which use particular phases in lesson design and interaction tactics, this paradigm is less explicit and prescriptive. Accordingly, the LT model gives instructors a conceptual framework for organising and customising CL activities and the school environment (Johnson and Johnson 1992)

## 7.3. Teacher's Role in a Collaborative Class

The role of the teacher in the classrooms where collaborative language learning is implemented is significantly different from the traditional teacher- centered classrooms. Collaborative learning allows teachers to create more learner- centered classes and focus upon students' learning needs. The teacher is no longer a lecturer or

transmitter of material, but rather a facilitator of learning who focuses on the learning process by encouraging cooperation among students. As a facilitator, the teacher gives students the opportunities to learn the material by themselves while helping them if a need arises (Crandall, 1999)

As a facilitator, teachers engage with students, support them in applying critical thinking to solve problems, offer feedback, explain challenges, and show empathy (Mc Donell 1992)

In collaborative language courses, teachers also function as observers. While learning in cooperative groups, they pay attention to students to learn about their needs, interests, challenges, and strengths. Teachers can use these observations to understand more about the learning process and adjust their lesson plans and activities (ibid). As observers, teachers may also step in during cooperative group activities if students want help or guidance towards the goals of the assigned tasks (Sharan, 1994)

Teachers must design well-structured assignments, clearly define the objectives of activities, assign students to roles in groups, choose appropriate materials, and organise students to accomplish the aims of collaborative language learning and reap the greatest benefits (Johnson & Johnson, 1994)

The success of all these preparations and the effectiveness of the collaborative language learning activities depends on the belief and the attitude of the language teacher towards collaborative language learning.

#### **7.4. Student's Role in a Collaborative Class**

Students' roles in collaborative language classrooms differ greatly from those in a standard teacher-centered classroom.

Instead of attempting to impress their teacher, the students are now genuinely engaged in their studies. The learner's main responsibility is to cooperate cooperatively with other group members to complete the tasks assigned to them. They become the directors of their own learning since they are taught how to plan their studies to maintain group productivity and to track and evaluate their learning process (Richards & Rodgers, 2001). Students who plan their own education develop into independent learner.

#### **7.5. Jigsaw Techniques**

The Jigsaw technique is a method of organizing classroom activity that makes students dependent on each other to succeed. It breaks classes into groups that each assemble a piece of an assignment and synthesize their work when finished. It was designed by social psychologist Elliot Aronson to help weaken racial cliques in forcibly integrated schools.

It encourages listening, engagement, and empathy by giving each member of the group an essential part to play in the academic activity. Group members must work together as a team to accomplish a common goal; each person depends on all the others.

The jigsaw technique is a cooperative learning method that brings about both individual accountability and achievement of the team goals. The process derives its name from the jigsaw puzzle because it involves putting the parts of the assignment together to form a whole picture .

The jigsaw technique is a method of organizing classroom activity that makes students dependent on each other to succeed. It breaks classes into groups that each assemble a piece of an assignment and synthesize their work when finished .

The assignment is divided into parts and the class is also divided into the same number of groups as that of the assignment. Each of these groups is given a different topic and allowed to learn about it. These groups are shuffled to form new groups consisting of members from each group .

The technique splits classes into mixed groups to work on small problems that the group collates into an outcome .

For example, an in-class assignment is divided into topics. Students are then split into groups with one member assigned to each topic. Working individually, each student learns about their topic and presents it to their group. Next, students gather into groups divided by topic. Each member presents again to the topic group. In same-topic groups, students reconcile points of view and synthesize information. They create a final report .

Finally, the original groups reconvene and listen to presentations from each member. The final presentations provide all group members with an understanding of their own material, as well as the findings that have emerged from topic-specific group discussion.

## 7.6. Teaching Performance

Instructional quality has a direct impact on educational quality. The teacher has a key role in improving education. The quickly changing conditions necessitate a higher level of professionalism from the teacher. In order to fulfil the demanding requirements of their profession, which include teaching students and helping them develop their skills, teachers are expected to employ the best techniques and strategies (Day, 2000)

## 7.7. Teaching Performance Domains

The National Institute for Excellence in teaching (2011) identifies six major areas in which teaching performance can be classified :

1. Establishing and preserving productive learning environments for students.
2. Ensuring that kids can understand the material.
3. Evaluating the learning of students.
4. Engaging and supporting students in learning .
5. Organizing classes and creating educational opportunities for pupils.
6. Developing as a professional educator.

## 7.8. Teaching Performance Tasks

All four teaching performance activities, which should be created so that they can be practiced frequently during their microteaching lessons, must be completed by student teachers. These tasks are :

1. Subject-Specific Pedagogy Task
2. Creating an Educational task
3. Evaluating the Learning Task
4. Sustaining teaching experience

## 7.9 Teaching Performance Assessment

During the first semester of Teaching Practice, student teachers have the chance to develop, refine and demonstrate their teaching knowledge, skills, and abilities through assessment. Performance evaluation serves two main goals:

1. to assist candidates in developing as professionals; to demonstrate their abilities to others; to integrate knowledge from various courses and student teaching experiences; and to exhibit their proficiency in meeting teaching performance standards.
2. to assure the education profession that student teachers who are prepared at College of Education meet the highest professional standards and are able to positively impact the learning of their students.

## 7.10 Teaching Performance Criteria

Bellingham Public School (2006) proposed the following standards for assessing the effectiveness of teachers:

### I. Instructional skills:

In his or her performance, the teacher demonstrates a high degree of expertise and proficiency in planning and executing a lesson.

#### Indicators:

- Uses learning principles, writes and teaches with specific goals in mind, and offers a range of educational opportunities.
- Employs teaching techniques that are suitable for the students, subjects, and objectives; monitors ongoing performance to modify lessons.
- Efficiently applies the school's objectives and guidelines shows originality in the process of educating.

### II. Classroom Management and Organization:

In his or her performance, the teacher demonstrates a high degree of expertise and proficiency in organizing the human and physical components in the classroom.

#### Indicators:

- Creates an environment in the classroom that is favorable to learning.
- Sets an example for behaviors and appearance that does not take away from the effectiveness of instruction.

- Evaluates individual differences, assigns students to suitable groups, and employs suitable teaching materials to satisfy each student's needs.
- When appropriate, let students plan and assess their own work.

### III. Student Discipline and Attendant Problems:

The teacher exhibits the capacity to control the human dynamics in the classroom that are not related to instruction.

#### Indicators:

- Conveys well-defined parameters-Identifies the circumstances that give rise to issues.
- Helps students develop self-control.
- Address discipline issues in a reasonable manner.
- Uses administrators' or support staff's aid effectively.

### IV. Knowledge of Subject Matter

The instructor exhibits a depth and scope of general education theory and topic knowledge as well as grade-level-appropriate subject area expertise. This has to do with the proficiency level of English required for effective language instruction. In order for training to concentrate on teaching English without being distracted by language deficiencies, this level should be reached before trainees enrol in the teacher preparation programmed.

#### Indicators:

- Provides proof of subject-matter proficiency in the areas that need to be taught .
- Acknowledges the connections between one's field of study and other fields or topics.
- Stays up to date on the latest advancements in the field .

### V. Interest of Teaching Students

By considering each student's distinct background and traits, the instructor shows that they understand and care about them. When working with students, the instructor exhibits excitement or enjoyment.

#### Indicators:

- Organizes learning activities according to each student's individual background and traits.
- Enjoys working with students.
- Provides prompt, meaningful communication among parents.

### 8. Training Approaches/Modes

Just as there should be a range of techniques in schools, a common element in any curriculum for teacher preparation should be variation in presentation. Training methods could consist of :

- The Frontal Mode. It is frequently referred to as the teacher-centered mode. Panel work, demonstration, brainstorming, seminars, Socratic discourse, task-based video lesson viewing, and the introduction of new content are all suitable uses for

it. Instead of the trainer, trainees might frequently prepare and perform the presentations and demonstrations.

- The Experiential Mode. With this method, trainees act out the roles of teacher and learner in peer and microteaching scenarios. It is obviously related to the front mode mentioned above; however, process is typically prioritized before content. In this approach, trainees can experience taking tests, learning languages, working in groups and pairs, and experimenting with various management styles and techniques.
- The Workshop Mode. This works well for creating materials, planning lessons, analyzing textbooks, creating examinations, and creating visual aids.
- The Pair/Group Work Mode. Most trainees will probably be involved in this for the majority of the period. It is primarily employed for jobs that are well defined and typically result in frontal manner discussion of viewpoints.
- The Individualized Mode. With sporadic sessions with trainers, this enables trainees to assume accountability for their own education. For readings, individual study, and one-on-one trainee assessment and counselling, this style works best (Cross, 2003).

During the first semester of Teaching Practice, the current study trained student teachers using both the workshop and pair/group work methodologies.

### 8.1 Teacher Training

Under teacher education, there are two headings: teacher development and teacher training. Basic teaching methods and skills are covered in teacher training, usually for new teachers enrolled in preservice education programmes. These skills cover aspects of teaching like lesson planning, classroom management, teaching the four skills (reading, writing, speaking, and listening), teaching language elements (pronunciation, grammar, and vocabulary), presenting and practicing new teaching materials, fixing mistakes, and more (Richards & Schmidt, 2010)

In addition to these abilities, the following themes have also been the focus of the study:

- Procedures for creating clear goals ,
- Steps of writing a lesson plan,
- Effective techniques for questioning strategies,
- Effective reading strategies,
- The application of writing prompts,
- Techniques for teaching vocabulary,
- Textbook analysis,

Giving learners the professional and personal skills they need in classrooms and other learning environments is the aim of teacher preparation programmers. In order for students to realize their full potential, teachers must impart subject-matter expertise, cultivate abilities, and cultivate attitudes (UNESCO, 2011)

Effective teaching practice must accompany preservice teacher preparation for it to be hopeful. Preservice teacher training in Iraq lasts for the fourth academic year. Teaching Practice in the first semester prepares student teachers for the practicum time in the second semester, which is when they actually teach.

Student teachers receive the knowledge and fundamental teaching techniques necessary for successful instruction during Teaching Practice classes. Consequently, there are two components to teaching practice: the theoretical and the practical. The theoretical section gives student teachers the fundamental knowledge about the teaching and learning process .

The practical component typically takes the kind of microteaching, in which a student teacher oversees a class directly and independently. As a kind of formative assessment, microteaching aims to provide student teachers with opportunities to put what they have learnt into practice. During their practicum, it gets student teachers ready to teach in actual classrooms .

### **9. Microteaching: Definition, Purpose, and History**

A significant part of the Teaching Practice course, Microteaching has a clear framework because it has. The term "microteaching" refers to a training setting where a teaching scenario has been systematically simplified or scaled down. There are two ways in which teaching many be scaled down: It is possible to simplify and make the teacher's role extremely specific .

The lesson's duration could be trimmed. (Hanna, 2003)

Student teachers have a deeper understanding of the teaching and learning processes through microteaching. It gives student teachers lots of chances to learn new teaching methods and to examine and consider both their own and other teachers' teaching philosophies. By allowing aspiring educators to share a brief sample of their planned lessons with friends and colleagues, microteaching aims to provide them with feedback, encouragement, and confidence (Slagoski, 2007)

The training method known as microteaching was first used at Stanford University in the early 1970s. It was initially used to educate science before being extended to language teaching. The psychology theory of behaviorism served as the first theoretical foundation for the Stanford method. Nonetheless, it is more appropriate to view microteaching as a method for professional introspection rather than as a method for behavior modification (Ibid)

In addition to being an effective technique for professional development, microteaching as a reflection tool enables educators to examine their own teaching and identify their areas of strength and weakness. Additionally, it makes teachers aware of the need to improve their own skills and strategies. Student teachers can seek self-initiated, self-directed, and self-observed growth through microteaching. The ability of student teachers to critique their own work, both favorably and unfavorably, leads to this development (Hanna, 2003)

The collaborative methodology adopted in this study, introduces microteaching which consists of workshop training methods and pair/group work ,

### 9.1 Microteaching Presentation

A formal introduction to microteaching and detailed instructions on how to give feedback for microteaching presentations are given to student teachers at the start of the programme. It is never expected of the student teachers to begin practicing teaching on their own. Students participate in the Teaching Practice once a week, where they can either present a microlesson or watch and comment on one that has been delivered by another student.

The goal of these experiences is to get the student teachers ready for successful full-time teaching careers are anticipated to exhibit proficiency at this pre-professional level while completing their practicum, or student teaching. Additionally, they must show that they can positively influence students' learning.

### 10. Experimental Design

Richards and Schmidt (2010:211) define the experimental design as the "plan for selecting participants, adjusting dependent variables, treatment, and collecting data".

The term "experimental design" describes techniques for forming comparable subject groups in experimental research (Riazi, 1999: 91).

The type and objectives of a study determine which of the several designs available in the experimental method is used. There are designs that are quasi-experimental and designs that are truly experimental.

When actual experiments are not practical, quasi-experimental designs are advised. The inability to randomly assign volunteers to experiment conditions is perhaps the biggest obstacle that researchers have while conducting experiments in natural environments. This happens when participants cannot be assigned at random due to administrative decisions or pragmatic concerns. Students in a single classroom or school, for instance, represent intact groups that could receive a treatment or intervention without the need for random group assignment (Shaughness et al., 2006:371).

Therefore, the nature and the aims of this study demand the use of one of quazi-experiemental designs, namely the non-Randomized control Group Pretest-Posttest Design. The experimental design of the study is illustrated in Table (1).

**Table 1**  
**The Experimental Design of the Study**

Group	Pretest	Independent Variable	Dependent Variable	Post test
1 <sup>st</sup> Experimental	Attitude Questionnaire	Collaborative Learning Strategy	Teaching Performance & Attitudes towards Teaching	Observation of Teaching Performance & Attitudes Scale
2 <sup>nd</sup> Experimental	Attitude Questionnaire	Jigsaw Techniques		
3 <sup>rd</sup> Experimental	Attitude Questionnaire	Peer-Tutoring Techniques		
Control	Attitude Questionnaire	-		

According to this design, four groups have been randomly assigned, three as experimental, and the other one as the control group. Collaborative Learning strategy, the first independent variable, is applied to the first experimental group. Jigsaw techniques, the second independent variable, is applied to the second experimental group. Whereas Peer-tutoring techniques, the third independent variable, is applied to the third experimental group And the traditional way of teaching is applied to the control group. The dependent variables in this study are attitudes towards teaching and teaching performance. Thus, collaborative learning strategies, Jigsaw, and peer tutoring techniques are manipulated and controlled over relevant variables in order to observe and measure their impact on the teaching performance and attitudes towards teaching of EFL student teachers.

### 10.1 Population and Sample

A population is any collection of objects or people that have certain observable and shared features and from which a sample can be drawn a sample is any group of people chosen to represent a population (Richards and Schmidt, 2010:506).

The sample of the study consists of the fourth-year students at the Department of English, College of Education, University of Misan. The total number of the population is 160 (SeeTable2)

**Table 2**  
**The Population of the Study**

College	No. of 4 <sup>th</sup> year students
College of Education for Humanities, University / Missan	155
Total	155

Because the researcher is a graduate scholar at the College of Education for Humanities /Missan, the college was deliberately chosen to provide the study's sample. There are four sections in the Department of English's fourth stage. Due to the nature of this study, three student teacher groups are required. Consequently, Section C serves

as the control group, Section D as the first experimental group, Section A as the second experimental group, and white section B as the third group all of which were selected at random. There are 41 student instructors in Section A, 38 in Section D, and 42 in Section C. After excluding students with prior EFL teaching experience, whether they were first-time primary school teachers or fourth-stage repeaters, the three divisions D, A, and C consist of 34, 36, and 33, respectively. Such of exclusion is only done for statistical purposes (See Table 3).

**Table 3 The Sample of the Study**

Group	Section	No. of student Teachers before Exclusion	No. of Excluded Student teachers	No. of student Teachers after Exclusion
1 <sup>st</sup> Experimental	D	36	3	33
2 <sup>nd</sup> Experimental	A	40	2	38
3 <sup>rd</sup> Experimental	B	38	1	37
Control	C	41	7	34
Total	----	155	13	142

## 10.2 Group Equalization

It is important to balance the individual differences of group subjects in order to create equivalent groupings. The results of the study could be impacted by some variables in the absence of such equivalency. Before the experiment starts, the equalization of the four study groups is checked. The most important factors are taken into consideration when conducting this checking, including the student teachers' age (in months), their final scores in the methods of teaching course (of the third year), and their scores to the pre-administration of the attitudes towards teaching questionnaire .

## 10.3 The Subjects' Age

The student teachers themselves provide information about the subjects' ages. Age is then turned into months. According to the statistical analysis, the 1<sup>st</sup> experimental group's mean is 255; the 2<sup>nd</sup> experimental group's mean is 267; the third experimental group's mean is 266 and the control group's mean is 256; the 1<sup>st</sup> experimental group's standard deviation is 5.407; the 2<sup>nd</sup> experimental group's standard deviation is 8.506; the 3<sup>rd</sup> experimental group's standard deviation is 8.428 and the control group's standard deviation is 8.423 (Table 4).

**Table 4**  
**The Mean and Standard Deviation of the Subjects' Age**

Group	No. of Subjects	Mean	Standard Deviation
1 <sup>st</sup> Experimental group	33	255.058	5.407
2 <sup>nd</sup> Experimental group	38	267.64	8.506
3 <sup>rd</sup> Experimental group	37	266.57	8.428
Control group	34	256.058	8.423

The computed F-ratio, as determined by ANOVA, is 2.120, whereas the tabulated F-ratio is 3.424. At the 0.05 level of significance and with (20, 15, 35) degrees of freedom, it is evident that the calculated F-ratio is less than the tabulated one. This suggests that the four groups are equal in terms of these factors and that there is no statistically significant difference between them (see Table 5).

**Table 5**  
**ANOVA Results of the Subjects' Age**

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F Value		Level of Significance 0.05
				Computed	Tabulated	
Between Groups	3896.917	20	194.846	2.120	3.424	.043
Within Groups	1205.833	15	80.389			
Total	5102.750	35	-----			

### 3.3.2 The Subjects' Final Scores in Methods of Teaching

Records from the Department of English provide information about the final scores of student teachers in the third-year Methods of Teaching course. When ANOVA is used, the tabulated F-ratio 3.424 is greater than the computed 2.120, indicating that the differences between the four study groups are statistically inconsequential at (20, 15, 35) degree of freedom and 0.05 level of significance (see Table 6 and Table 7). This suggests that, in terms of this variable, the four groups are equal.

**Table 6**  
**The Mean and Standard Deviation of the Subjects' Final Scores in Methods of Teaching**

Groups	No. of Subjects	Mean	Standard Deviation
1 <sup>st</sup> Experimental	33	80.25	12.074
2 <sup>nd</sup> Experimental	38	77.22	10.049
3rd Experimental	37	76.50	9.860
Control	34	78.67	10.981

Table 7

**ANOVA Results of the Subjects' Final Scores in Methods of Teaching**

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F- Value		Level of Significance 0.05
				Computed	Tabulated	
Between Groups	1070.139	20	286.230	2.44	3.424	.825
Within Groups	2464.083	15	164.272			
Total	3534.222	35				

**10.4 The Study Instruments**

An observation checklist has been constructed to accomplish the study's objectives. By this instrument, student teachers' teaching performance is measured using a recorded observation checklist.

**10.4.1. Performance Assessment**

Performance assessment evaluates how well students translate their knowledge and understanding into reaction or a product. In a performance evaluation, the situation does not necessarily have real-life, but the student must demonstrate certain behaviors in order to be assessed. The actions that the assessor wants to measure must be displayed by the students (Meyer, 1992).

A few examples of activities that could be used to assess performance are: (1) observational assessment; (2) simulations, including simulated performance tests; and (3) personnel records, including internships, portfolios, and transcripts. Airasian (1993) asserts that there are four crucial components to every formal evaluation of performance among them are:

- 1- Having a well-defined goal that explains the reasons behind the performance evaluation.
- 2- Identifying the measurable and observable attributes of the student's performance that the assessor will use to make a judgement.
- 3- Providing a suitable environment in which to judge the performance or product as accurately as possible.
- 4- Defining the required instrumentation and scoring or rating criteria before the examination.

Students can demonstrate their knowledge or abilities in real-world scenarios through performance evaluation. As a result, observational data is a useful tool for evaluating performance.

Both explicit descriptions of particular observable acts and selected interpretations of behaviors are components of good observation. For observations to be useful, they must be impartial. Defining the actions that result in subjective interpretations is necessary for objectivity.

Anecdotal records, rating scales, checklists, questionnaires, and portfolios can all be used to increase the validity and reliability of the formal performance assessment process (Moore, 2007:333).

In essence, a checklist is a list of the criteria by which a student's performance or end product will be judged. Rating scales can be used to make judgements valid, unbiased, and trustworthy.

Rating scale can be helpful in evaluating skills, product, procedures, and social behaviours and attitudes. Rating scales permit observers to isolate a total performance into sub skills, with appropriate scale judgements, can better determine the quality of student's performance. The results are more valid and reliable observations. A rating scale is a series of categories that is arranged in order of quality (ibid: 326).

#### 10.4.1.1 The Teaching Performance Checklist (TPC)

One procedure used to carry out this study is to observe student teachers in practising teaching during their practicum. An observation checklist is created in order to document the observation data. Student teachers' abilities, knowledge, and duties are evaluated using this checklist. The National Institute for Excellence in Teaching's 2011 classification of fundamental teaching principles served as the foundation for the checklist's creation.

These standards are divided into four primary categories. The first is devoted to instruction, the second is about designing and planning instructions, the third one is concerned with the learning environment, while the fourth one sums up the student teachers' responsibilities.

These standards are used because they are clear and comprehensive. The researcher constructed a checklist of teaching performance that has 32 items total—16 in the first domain, 3 in the second, 5 in the third, and 8 in the last. The rating scale is a four-point scale with the following attributes: poor, fair, good, and very good and the corresponding values are 1, 2, 3, and 4, respectively.

#### 10.4.2 Validity of the Instrument

The checklist of teaching performance along with the adopted standards, are exposed to a panel of TEFL experts to decide whether or not the standards and the checklist items are suitable for measuring Iraqi student teachers' teaching performance, to modify the suggested rating scale if needed, and to decide face validity.

According to an observer's subjective judgment, face validity is the extent to which the checklist seems to measure the abilities it claims to measure (Richards and Schmidt, 2010:216).

Three items have been omitted, according to the majority of experts (70%): staff development in the last domain, and thinking and problem solving in the first. Staff development is left out since it has nothing to do with Iraqi student teachers, problem solving is removed because it falls under other categories like activities, and thinking

is left out because it is hard to observe and quantify. Every expert has expressed support for the proposed ranking system.

One approach to determining the construct validity of a measure relies on other kinds of validity; discriminative validity. Discriminative validity is shown by the fact that the test correlates little or not at all with measures of other traits, whether by the same method or by other methods (Riazi, 1999:76).

Item discrimination and item analysis have been obtained for the Attitudes towards Teaching Scale.

According, seven items have been deleted. Some items are deleted due to their irrelevance, while others are deleted because they are irrelevant to the field of study.

The total number of items is 28. The positive items are 21 and seven negative ones. They are the 3d., 5th, 10th, 15th, 20th, 22nd, and 27%.

#### **10. 4. 3 The Pilot Administration**

The try-out phase of a newly prepared but not fully developed test is known as pilot testing, or trialing. Based on the Item Analysis derived from pilot test results, tests under development may be modified (Richards and Schmidt, 2010:455).

A pilot administration has been carried out to check the items' clarity, estimate the time required for the observation, and compute the checklist's reliability in order to fully create the observation checklist of teaching performance standards.

Thirty-two student teachers from section B of the English department at the College of Education for Human Sciences/Misan comprise the pilot sample. The study sample does not include Section B (see Table 3).

#### **10.5 Reliability**

Reliability is the degree to which a test gives consistent findings. If a test yields consistent results when administered on many occasions or by different individuals, it is considered dependable (Richards and Schmidt, 2010: 495).

Two techniques have been employed to determine the observation checklist's reliability. Split-half reliability is a measure of internal consistency reliability that is based on the correlation coefficient between two test halves that are presumed to be parallel, (such as the odd and even numbered items or the first and second half of the test items) (ibid: 548).

In order to represent even-numbered items and odd-numbered ones, the pilot sample's scores have been divided into two halves (see Table 8). The correlation between the two halves is found to be 0.828. This value represents half of the test, therefore, Spearman-Brown Coefficient is used for correction purpose it yields 0.906.

Cronbach's Alpha is the second technique for measuring reliability which, a measure of internal consistency based on data regarding (a) the number of items on the test (b) the variance of each item's scores, and (c) the variance of the total test results. It is mathematically equal to the mean of the reliability estimates for every potential split. The degree to which test items or sections are homogenous, equivalent, or

consistent with one another is measured by internal consistency reliability. It is based on a single test.

Administration and eliminates the necessity of parallel test forms, which are often expensive and difficult to develop (Richards and Schmidt 2010:148).

In order to determine the comparable average of the dependability estimated for all splits, Cronbach's Alpha is utilised. Regarding the checklist's domains, each one has been found to be reliable (see Table 9). According to mathematics, it is equal to the mean of the reliability estimates for any split that could occur (Richards and Schmidt, 2010:148).

**Table 9**  
**Cronbach's Alpha of Each Domain of Teaching Performance Checklist and the Checklist as a Whole**

No.	Domain	No. of Items	Cronbach's Alpha Coefficient
١	First	14	0.724
٢	Second	3	0.823
٣	Third	5	0.732
٤	Fourth	6	0.703
Total	The checklist as a whole	28	0.822

According to the statistical analysis of the four groups' scores, the 1<sup>st</sup> experimental group's mean score is 80.25, the 2<sup>nd</sup> experimental group's is 77.22, the 3<sup>rd</sup> experimental group's is 76.56 and the control group's is 72.67. The corresponding standard deviations are 12.074, 10.049, and 10.981. These values are shown in Table 10.

**Table 10**  
**The Mean and Standard Deviation of the Four Groups in TPC**  
**((Teaching Performance Checklist))**

Group	Sample size	Mean	Standard Deviation
1 <sup>st</sup> Experimental	٣٣	80.25	12.074
2 <sup>nd</sup> Experimental	٣٨	77.22	10.049
3 <sup>rd</sup> Experimental	37	76.50	9.860
Control	٣٤	72.67	10.981

Analysis of Variance (ANOVA) has been utilized to determine the statistically significant differences between the four study groups, as shown in Table 11.

**Table 11**  
**ANOVA Results of the four groups in TPC**  
**((Teaching Performance Checklist))**

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F Value		Level of Significance
				Computed	Tabulated	
Between Groups	732.330	20	3548.864	12.523	3.424	0.05 Statistically Significant
Between Groups	25671.143	15	266.711			
Total	34278.843	35				

Table 16 shows that, at 20, 15, 35 degrees of freedom and the 0.05 level of significance, the computed F-ratio 12.523 is greater than the calculated one 3.424. This suggests that the four research groups differ in ways that are statistically significant. Following-up analysis can be performed to identify which specific group differs due to causes other than chance once an overall significant F has been identified. In order to determine the cause of the differences among the four groups, the Scheffe Test is employed (see Table 12).

**Table 12**  
**Scheffe Values for the Comparison among the Four Groups in TPC**  
**((Teaching Performance Checklist))**

Group	Control	1 <sup>st</sup> Experimental	2 <sup>nd</sup> Experimental	3 <sup>rd</sup> Experimental
1 <sup>st</sup> Experimental	-12.387	-	-	-
2 <sup>nd</sup> Experimental	-7.417	-20.643		
3 <sup>rd</sup> Experimental				
Control				

Scheffe critical value is 5.201 at 0.05 level of significance\*

The following is shown in Table 12:

1. The crucial Scheffe value, which is 5.201 at the 0.05 level of significance, is lower than the calculated Scheffe value of 12.387 for the difference between the mean scores of the control group and the 1<sup>st</sup> experimental group. This suggests that the experimental group that is taught using the collaborative strategy has a statistically significant advantage.
2. At the 0.05 level of significance, the calculated Scheffe value for the difference between the control group's mean scores and the 2<sup>nd</sup> experimental group's mean scores is 7.417, which is greater than the crucial Scheffe value of 5.201. This suggests that the experimental group that is taught using Jigsaw technique, the second one, has a statistically significant advantage.
3. The crucial Scheffe value, which is 5.201 at the 0.05 level of significance, is lower than the calculated Scheffe value of 6.734 for the difference between the mean

scores of the control group and the 3<sup>rd</sup>. experimental group. This suggests that the experimental group that is taught using peer tutoring technique has a statistically significant advantage.

## 11. Conclusions

1. Students' abilities, and accomplishments are enhanced when innovative and contemporary teaching and training methods are used. One of the cutting-edge pedagogies that has been proven to be beneficial in raising the teaching proficiency of EFL student teachers is collaborative learning.
2. Students can develop to the best of their abilities in all areas of the fundamental teaching techniques when they are actively involved in the learning process. Including collaborative contact in the curriculum is one strategy to increase student participation.
3. Collaborative learning is one of the classroom-based pedagogies of involvement that can assist in disrupting the conventional lecture-dominant pattern.

## References

- Airasian, P.W. (1993). Classroom Assessment (2<sup>nd</sup> ed.) New York: McGraw-Hill.
- Albermani, H., K. (2012). The Impact of Teaching Strategies Instruction on EFL College Student Teachers' Performance. Unpublished Ph.D. Dissertation. University of Baghdad.
- Al-Khafaji, R.M. (1999). The Effective Effect of Training Programmes on the Professional Competency of Student Teacher of English. Unpublished Ph.D. Dissertation. University of Baghdad.
- Allprt, G.W. (1996). Attitudes in the History of Social Psychology, in Jahoda, M. And Warven, N. (eds.). Attitudes: Selected Readings. England: Penguin Books Ltd.
- Bellingham Public School (2006). Teacher Observation and Evaluation Criteria. Bellingham, W.A: Bellingham Public School. <http://www.bham.Wednet.edu/departments/currdept/profdev/observeva/crit.Htm>.
- Bilkhair, A., S. (2000). The Attitudes of Students at College of Education, University of Hadramout towards Teaching. Unpublished M.A. Thesis. Basra University.
- Brock, T. And Shavitt, S. (1994). Psychology for Persuasion. San Francisco: Freeman.
- Brown, H. Douglas. (2000) Principles of Language Learning and Teaching(4<sup>th</sup> ed.)Addison Wesley Longman: Pearson Education.
- Brown, H. Douglas (2001). Teaching by Principles: An Interactive Approach to Language Pedagogy (2<sup>nd</sup> ed.). Addison Wesley Longman: Pearson Education.

- Bruffee, K. (1999). Collaborative Learning: Higher Education, Interdependence, and the Authority of Knowledge. Baltimore, Md: Johns Hopkins University Press.
- Duderstadt, J.J., Can Colleges and Universities Survive in the Information Age?. In Katz, R.N. And Associates, eds., Dancing with the Devil: Information Technology and New Competition in Higher Education, San Francisco, Cal: Jossey-Bass, 1999.
- Duffy, T.M., and D.J. Cunningham, (1990). Constructivism: Implications for the Design and Delivery of Instruction. In The Handbook of Research for Education and Technology. Indian University.
- Ellis, A.K., (2001). Collaborative Learning. In A.K. Ellis (Ed.), Research on Educational Innovations. Larchmont, New York: Eye on Education.
- Ellis, R., (1994). The Study of Second Language Acquisition. Oxford: Oxford University Press.
- Erikson, E.H., (1963). Youth and Crisis. New York: Norton.
- Eisner, E. W., (2002). The Educational Imagination. (3<sup>rd</sup>ed.) Upper Saddle River, New Jersey: Merrill Prentice Hall.
- Elyildirim, S. And Ashton, S., (2006). Creating Positive Attitudes towards English as a Foreign Language. English Teaching Forum, 44 (4): 2-11.
- Gay, L. Mills, G., and Airasion, P. (2010). Educational Research: Competencies for Analysis and Application (8<sup>th</sup>ed.) Person: Person Practice Hall.
- Gleitman, H., (1996). Cognitive Engagement in Cooperative Learning. ERIC Document: ED 404 352. [www.eric.ed.gov](http://www.eric.ed.gov).
- Handbook for student Teaching.(2013) Florida State University. Professional Education Unit Office of Academic Service Intern Support.Tallahassee:Florida.
- Hanna, E.W. (2003), Microteaching English Teaching Forum. 41(4): 44.
- Hannafin, M.J., (1997). The Case for Grounded Learning Systems Design: What the Literature Suggest about Effective Teaching, Learning and Technology, paper presented at the ASCILITE Conference, Perth, Australia.
- Harmer, Jermy, (2007). The Practice of English Language Teaching. (4<sup>th</sup> ed.) Longman,an: Pearson Education Ltd.
- Humphreys, B., Johnson, R., Johnson, D., (1982). Effects of Cooperative Competitive and Individualistic Learning. Journal of Research in Science Teaching, 19(5), 351-356.
- Johnson
- Johnson, D.W. and Johnson, R.T., (1974). Instructional Goal Structure: Cooperative, Competitive, or individualistic. Review of Educational Research, 44, 213-240.
- Johnson, D.W., and Johnson, R.T. (1989). Collaborative and Competitive: Theory and Research. Edina, M.N.: Interaction. Johnson, R. and Johnson (1992). An

Overview of Collaboration Learning. [www.Eric Digest](http://www.Eric Digest). Eric Clearinghouse Urban IL.

- Johnson, D.W., and Johnson, R.T. (1991). Learning Together and Alone: Collaborative Competitive and Individualistic Learning (3th ed.,) Englewood Cliff, NewJersy: Prentice-Hall.
- Johnson, D.W., and Johnson, R.T. (1999). Learning Together and Alone: Collaborative Competitive and Individualistic Learning (5<sup>th</sup> ed.,) Englewood Cliff, NewJersy: Prentice-Hall.
- Johnson, D.W., and Johnson, R.T., (2002). Meaningful Assessment: A meaningful and Collaborative Process. Boston: Allyn and Bacon.
- Johnson, D.W., and Johnson, R.T., (2004). Cooperative Learning and Social Psychology: The Interrelationship Among Theory, Research, and Practice. Symposium: Efforts to Bridge Social Psychology and Education. Harries Cooper, Chair, Society of Experimental Social Psychology, Annual Conference, Dallas, Oct. 15-16.
- Johnson, D.W., Johnson, R.T., and Smith, K.A. (1991). Active Learning: Cooperation in the College Classroom. Edina, Mn: Interaction Book Company.
- Johnson, D.W., and Johnson, D.T. And Smith, K.A., (1998). Active Learning: Collaboration in the College Classroom (2<sup>nd</sup> ed). Edina, MN: Interaction Book Company.
- Kagen, S., (1991). Collaborative Learning. San Juan Capistrano, Calf: Resour
- Karavas, D.E., (1996). Using Attitude Scales to Investigate Teachers' Attitudes to the Communicative Approach. ELT Journal, 50(3): 187-198.
- Katzenbach, J.R. and Smith, D.K., (1993). The Wisdom of Teams: Creating High-Performance Organization. Cambidge, Mass: Harvard School Press.