

## Recruitment of Teachers for Cooperative Education in Educational Institutions

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**Abstract**—The study of cooperative education is important not only for researchers but also for those interested in studying educational methods, such as university professors, teachers in schools, and all educational institutions. This is because of its effectiveness in teaching students, developing their skills, developing their ideas and employing them in the study and finding appropriate solutions to the questions posed by the teacher. It also helps in instilling a spirit of cooperation among the students by dividing them into groups to achieve the desired goals. The aim of the study is to clarify how important it is for teachers to use cooperative education in addressing the educational, social and psychological aspects when teaching students in educational institutions. The study is divided into three sections. The first section presents the general framework of the study dealing with the problem, importance and objectives. The second section deals with the concept of cooperative education, its importance and the date of its inception. This section also discusses the most important theories that I mentioned about its importance, results, foundations and objectives of cooperative education, including its benefits, characteristics, stages and strategies. It clarifies the role of the teacher and student in e-learning. The third topic dealt with the methodology of the research and presentation of the results, their interpretation and discussion. The research reached several conclusions, the most important of which are: the teaching staff in educational institutions enjoy a high level in employing cooperative education in their teaching to students and to achieve the educational, social and economic goals, all of which were significant and used.

**Keywords**—group, cooperation, skill, ideas, thinking, problems, theory, student, goals

### 1 Introduction

The importance of the topic of cooperative education is that it is an important method of teaching used in educational institutions, whether in schools or universities. This is due to its effectiveness in achieving important results in the field of education. It also contributes to creating an interactive study atmosphere or setting and leaves a long-term effect on the part of the students. Cooperative education incites brainstorming and creates legitimate competition among the students by dividing them into several groups;

each group seeks to answer the questions asked and obtain high grades that outperform other groups, which enhances self-confidence and strengthening relationships among them. Cooperative education has received the attention of researchers and psychologists, who have developed theories about it. They examined its psychological, educational and social impact, as well as its educational goals, characteristics and benefits. Teachers and university professors must be encouraged to apply it in educational institutions in a proper manner. Because of the importance of this topic, many studies have dealt with cooperative education as an important method of education.

The current research sheds light on the concept of cooperative education and its development, the most prominent psychologists who cared about it, and the most important theories whose importance and effects are equal.

One of the important titles that we referred to is the necessity of applying electronic cooperative education through the Internet, which has a significant impact on developing students' skills in the use of computers and electronic technologies, as well as encouraging the teachers to strengthen their skills in this aspect. Despite the importance, characteristics and benefits of cooperative education, it has several negatives aspects. The most important of which is the lack of cooperation of some students within their groups, in addition to other negatives sides that we discuss during the research.

## **2 The general framework of the research**

Cooperative education is one of the modern teaching methods. It aims to accustom students to teamwork and responsibility. It also allows the student the freedom to ask questions and inquiries, use imagination, curiosity, and motivation for achievement. It enables them to explore, analyse, and solve the problems through effective scientific methods [1, 2]. Cooperative education is a teaching model in which students perform controlling skills with each other while participating in understanding, dialogue and information related to controlling skills, and help each other in the learning process, and during this performance and interaction they develop positive personal and social competencies [3, 4]. The use of cooperative education represents an education that is based on highlighting the different roles of the educational elements provided by the teacher and the student. Accordingly, the problem is identified by the following question: What is the importance of teachers employing cooperative education in the educational, social and psychological aspects when teaching students in educational institutions?

### **2.1 The importance of the research**

It lies in the theoretical side, which deals with the definition of cooperative education, its origins, the theoretical background, its characteristics, benefits, steps, negatives and strategies, as well as an explanation of the role of the teacher and the learner in cooperative education.

## **2.2 The research objectives**

- a. Knowing the concept of cooperative education among teachers according to the educational institution.
- b. Recognizing the preference for cooperative education for teachers of educational institutions according to the variables of academic achievement and length of service.
- c. Understanding the importance of employing teachers of cooperative education in the educational, social and psychological aspects when teaching students in educational institutions.

## **3 The theoretical framework of research**

The interested idea of cooperative learning began in 1900 by the scientist Kurt Koffka, one of the poles of the Gestalt theory, as he showed the importance of working in groups and its reflection on everyone within the group and that the success of the individual in the group is the success of the whole group. Then came Kurt Lewin (Kurt Lewin) in 1934 and then came the scientist Johnson, who gave a new concept of cooperative learning. He divided the students into small groups to achieve common goals for the group according to instructions set by the teacher [5]. One of the most important who supported the idea of cooperative education indirectly was (Jean Piaget), the famous psychologist who had a great impact on the curricula and the organization of the education ladder. His theory confirms that the learning and development of the individual results through collective cooperation between peers. He explained that children discover meaning and form their personalities based on the similarities and differences between them and others, as the child works during the interaction within a group as a conductor and recipient of instructions and information, and that this interaction, which results in a lot of negotiation and discussion leads to the development of listening skill and learning how to reach a compromise. This helps to install and develop one's skills [6]. This is different from what the scientist Vygotsky saw, the author of the theory of the influence of society on mental development who encouraged another type of cooperative learning. In fact, he differed from Piaget in that he insisted on the role of society in the student's gaining knowledge. He believed that learning takes place in the best form under the supervision and cooperation of those who have experience more, and he called that teaching should focus on providing the opportunity for students to interact with experienced people. His theory focused on that students should be placed in situations that allow them to cooperate with the most capable people (for example: encouraging school trips, inviting officials to the classroom...) He believes that learning from the most experienced person results in the student acquiring more information, and enables him to address problems in a more focused manner, which helps the student to grow and develop, and this contrasts with students who work alone and receive traditional education [7]. However, studies and research did not begin to focus on its applications in the classroom until the beginning of the seventies and developed different patterns for the application of cooperative learning in the classroom. One of these methods is the Student Team Learning method, which was developed by Salviati based

on psychology theories. David and Roger also developed Learning Together based on social psychology theories Johnson also developed the Complex Instruction Approach, drawing on sociology theories and other different methods that all rely on group participation in education rather than solitary education. A lot of research studies studying these methods compared to each other or by comparing them to the traditional education system, and they showed different results, as some of them found that cooperative learning was an effective factor in increasing academic achievement, while other studies showed that there was no difference in academic achievement between grades. Students in cooperative education and between students in individual education, but most studies confirmed that cooperative education had a positive effect in enhancing self-confidence, and in forming a good feeling towards colleagues and school, in addition to helping to develop various social relations between groups of students The Concept of Cooperative Education is “finding an organizational structure for the work of a group of students so that all members of the group immerse themselves in learning according to clear and specific roles, with the assurance that each member of the group learns the educational material”[8, 9]. It is also defined as “a method in which students work in small groups in the classroom, each of which includes different levels of achievement (high – medium – weak). Students of one group cooperate in achieving a different goal or goals to increase their learning, and teach each other” [10]. Cooperative education is one of the teaching strategies based on cooperation and exchange of responsibility in learning among the members of the cooperative group, their interaction with each other and integration among them to reach the desired learning, and competition in it is competition between groups and not between individuals [11]. One of its most important definitions is a set of teaching strategies that put the learner in a collective position in which he performs the roles of teaching and teaching at the same time, and what this requires of working with his group, to achieve common goals that include all the cognitive, emotional and skill aspects [12]. One of its most important definitions is a set of teaching strategies that put the learner in a collective position in which he performs the roles of teaching and learning at the same time, and what this requires of working with his group, to achieve common goals that include all the cognitive, emotional and skill aspects [13].

### **3.1 Theoretical background of cooperative education**

- a. Social Interdependence Theory: It is an assumption based on the method of building social interdependence to determine how individuals interact together and determine the outcomes. Positive interdependence (cooperation) leads to enhanced interaction when individuals encourage each other to learn. It is the scientist Kurt Koffka theory, who contributed to the development of the overall theory (Gestalt) [14].
- b. Theory After Cognitive Development: It is based on the theoretical basis of cognitive psychology and pioneered by Jean Piaget. It is based on the fact that knowledge is a social behaviour that shows through cooperative efforts made to teach, understand and solve problems, and members during that practice this behaviour also by exchanging information and experiences, discovering weaknesses in each

other's thinking strategies, correcting each other and modifying their understanding accordingly [15].

- c. Behavioural Learning Theory: Focuses on collective reinforcement and rewards motivating education. It dictates the behaviours which receive external rewards are repeated, so that external rewards help motivate individuals to learn in societies [16].

### **3.2 Characteristics of cooperative education**

Cooperative education depends on dividing the class into small groups and the goal of the individual is the goal of the group. The student is an active element in this type of learning that works to motivate him to learn and academic achievement. The goals are achieved through cooperation and positive interaction among the group's students. It complements the role of the teacher and does not cancel it. It is also valid for all stages of learning and is used in all academic subjects and theoretical and practical disciplines. It has multiple models and is used with all students at different levels. Learners cooperate and help each other and usually the effect of learning results from the interaction and cooperation of individuals. It provides opportunities for discussion and dialogue and works on exchanging experiences. While working. It affects many educational outcomes in an instantaneous manner [17].

### **3.3 Benefits of cooperative education**

Among the benefits of Cooperative Education is to achieve high rates in student achievement, improve their thinking abilities. It also aims at creating positive relationships among students and decreasing their behavioural problems. It contributes to the development of cooperation skills with others and develops in students a sense of belonging to a group of which he is a part. It develops in the students the skill of analysis, investigation and awareness of the relationships associated with concepts, and it provides the student with the opportunity to raise questions that he is not used to raise in class [6].

### **3.4 Employment of cooperative education**

The Educational Aspect: Cooperative education seeks to achieve the educational goals as encouraging the continuous performance and achievement of students within the same group. It increases achievement in all academic levels compared to traditional methods. Also leads to finding a kind of integrated education for the learner and helps to get rid of undesirable trends and behaviour patterns such as selfishness, dishonest competition, and excessive individualism. Training students take on diverse individual and collective responsibility. Putting the student at the center of the educational process and developing a self-learning method among students. Encourages discussion, exploration, and various cognitive learning strategies, while other styles do not depend on exploration, which makes the student the center of the educational process, also encourage competition and interaction. In cooperative groups, ideas challenges occur that

stimulate students' motivation towards learning and achievement. It also maintaining and respecting the system, and the adoption of cooperative education on the exchange of ideas and experiences. It leads students to take responsibility [18].

The Social Aspect: Cooperative education contributes to strengthening social ties between individuals and leads to a sense of the necessity of social life on an ongoing basis between students with each other. It acquires the desired social skills through interaction between group members. Also develops relationships between students, and strengthens friendship bonds, which increases affection, love, and respect among them. It works to support behavioural patterns that focus on work and increase production and activity [19].

The Psychological Aspect: Cooperative education seeks to achieve the psychological objectives like Cooperative education concerns about the learners' psychological needs and takes them into account through teamwork and belonging to the group. It helps discover individuals' tendencies and talents and works on refining them and provides an opportunity for each student to express his thoughts. Also considers the individual differences between individuals, from all Physical and cognitive aspects, attitudes, and interests. So, teamwork and interaction with it contributes to relieving introversion and mental wandering in some students, which reduces their tension and increases positive psychological compatibility. It increases students' self-esteem, helps reduce anxiety, improves student's psychological satisfaction, and encourages students on accepting help and supervision from their peers, and having positive attitudes towards teachers or trainers [20–22].

### **3.5 The basic elements of cooperative education**

1. Positive Interdependence: It means that all members of the group know that the success of the work is their responsibility and that this is shown in the behaviour of each one of them.
2. Individual and Collective Responsibility: as everyone is responsible for mastering the subject matter of the lesson, and this requires great cooperation between the members of the group. And face-to-face interaction with the community of the members of the group to complete the work where they teach each other and explain to each other to reach the common goal by committing time and encouraging interaction reinforcement between members.
3. Interpersonal Communication skills, interpersonal skills, and group work skills
4. Students should be trained in these skills. The more members use these skills, the better the learning will be. It includes working skills within groups, discussing ideas and developing thinking skills.
5. Processing the work of groups and preparing the material, which means preparing the material in its final form and examining the work of the members of the group to determine the effectiveness of cooperative efforts and then working to improve those efforts by following up on the work of the groups and making decisions about the members' actions and cooperative work procedures [23, 24].

### **3.6 The strategies of cooperative learning**

Among the most important cooperative education strategies are the following: Pairing learning strategy, learning teams strategy, dividing students into achievement teams, learning together strategy, small group learning strategy, large group learning strategy, team games strategy, structural strategy, jigsaw puzzle strategy, and group investigation strategy [25, 26].

### **3.7 Cooperative learning steps**

For have a successful cooperative education, it is necessary to follow sequential and organized steps, which are as follows: Choosing a unit or subject to study, which can be taught to students in a specified period. The teacher made an organizing worksheet for the educational unit. Organizing the learning and test items. Dividing the students into cooperative groups with different characteristics and characteristics, such as achievement. Each group sends its delegates to work with delegates from all groups. After the group of delegates completes its studies and plans, each of them returns to his original group and transmits what he learned to the members of his group. Group rewards are offered to the superior group [27, 28].

### **3.8 Types of cooperative learning groups**

- a. Formal cooperative learning groups: They are groups that last from one lesson to several lessons in which students work together to ensure that they and their colleagues in the group successfully complete the educational task assigned to them. Any educational task in any subject for any syllabus can be built collaboratively, and any requirements for any course or task can be reformulated to fit the formal cooperative learning groups.
- b. Informal educational cooperative groups: defined as special purpose groups lasting from a few minutes to one session. This type of group is used during direct instruction that includes activities such as making a presentation or showing a video tape with the aim of directing students' attention to the material to be learned, preparing students psychologically in a manner conducive to teaching, helping to set expectations about what will be studied in the lesson, and ensuring Students process the material intellectually and provide a good end to the lesson.
- c. Basic Cooperative Education Groups: They are long-term, heterogeneous, and fixed-member groups whose main purpose is for their members to provide the support, support, and encouragement they need to achieve academic success. Core groups provide the student with committed, lasting, and long-term relationships lasting at least a year and possibly longer [29–31].

### **3.9 The role of the teacher (professor) in cooperative education**

The success of cooperative education depends on the skill of teacher in dealing with cooperative groups, by making the decision to define educational goals, forming

educational groups, preparing the lesson, and distributing roles to them. He also must explain the basic strategic concepts, and then inspect the work of cooperative groups and teach students work skills. Also, assessing the learning of the group students and providing the appropriate conditions for cooperative learning [32]. Choosing the topic and the main headings, defining objectives, as well as organizing and managing Al-Qaeda. Forming groups considering the foundations of cooperative education and choosing the group format. Defining the main and subtasks of the subject and managing learning. Preparing for the work of groups and educational materials and determining the required resources and activities. Providing learners with the necessary instructions for work and choosing a coordinator for each group regularly. Providing praise and support to students and creating a spirit of enthusiasm for them. Observing the participation of group members. Ensuring the interaction of group members. Connecting ideas after the end of work. Evaluating learners' performance and determining assignments and class duties [33–36]. Despite this role that the teacher plays, there are some difficulties that he faces in working with the cooperative educational system, as the group's opinions may be divided during the discussion, and the teacher will have to choose one side of it, so the other side will be frustrated and uncomfortable [37, 38].

### **3.10 The role of the learner in cooperative education**

1. Leader or mentor: His role is to explain the mission, lead the dialogue, and ensure the participation of everyone. Its function is to direct the work of the group, define the responsibility of the members, organize expertise, and help them achieve the goal of the work.
2. Observer: His job is to observe the members of the cooperative education group
3. The encourager: Its function is to praise the performance of the members if they do well and achieve better learning. He makes sure everyone is involved, encourages them to work, gets the job done before other groups and respects everyone.
4. Abstract: It takes notes and formulates questions and answers as it agrees with the rest of the group by putting the studied topic in its final form.
5. The Recorder: Its function is to record the important items that will be discussed, and which have been discussed, as well as records the decisions taken by the group.
6. Materials Officer (tool holder): He is responsible for bringing all materials and raw materials from their place to the group's workplace. He is the only student allowed to roam in the classroom.
7. The seeker: He is responsible for understanding the group members of the discussions or opinions.
8. The course: presents the work of his group and its findings to the rest of the groups and to the teacher.
9. The supervisor: ensures that the group completes the work in a timely manner, that everyone performs his role, and that materials and raw materials are properly used.
10. The critic: shows some shortcomings in the performance of his group and justifies his opinion and suggests the required amendment [39–41].



### **3.11 Factors that contribute to the success of cooperative education**

Availability of sufficient time to complete the co-operative education lessons, the size and organization of the classroom. The students' sense of self-reliance and commitment at work. The distribution of roles and staying with the participating group Cooperation and trying to think Actively listening to others And asking for the help of others in the group And returning to the teacher only when Failure of group members to understand the tasks required of them. Sticking the basic rules on the group's seats or in front of the class. Constant reinforcement and encouragement by the teacher, reassurance, clarity of goals, continuous evaluation [6, 42]. The lack of an appropriate curriculum to apply such a type of teaching, the time available to complete cooperative tasks, and the appropriate classroom climate to implement cooperative education. Teachers in the application of cooperative education in the classroom [43]. It requires special arrangements and numbers considering crowded classrooms. Preparing the classroom environment requires a financial cost and functional efforts. It is difficult to control the class and the loudness of the students' voice. It is also difficult to adopt dialogue because they are not accustomed to it [44]. Collaborative e-learning is a strategy that helps learners to learn and work together to learn, a method of work that is done using information and communication technology, and helps to overcome geographical distances, and overcome language barriers. After students were sitting together in the classroom, they can now cooperate while sitting in places dispersed around the world through the Internet, and each learner accomplishes the tasks and activities assigned to them at anytime and anywhere through synchronous and asynchronous interaction tools available on the Internet, and through an educational site that provides a number of electronic learning materials and resources and encourages cooperation and is based on strategies and principles of cooperative learning [45, 46]. Also, E-meeting saves money, time, and effort, encourages team and cooperative work, helps to overcome geographical distances, and overcome language barriers [47]. The computer encourages cooperative learning by its nature, as it provides a different learning environment in and of itself, in which the image, audio and video are available, in addition to the availability of direct feedback, which makes it a distinctive educational tool, and the presence of more than one student to work on the computer helps to encourage intellectual discussions, and allows a deeper understanding of the principles [48]. It also reduces the anxiety and tension that accompanies working and learning on the computer. Students' learning within a computer-rich environment has a positive impact on increasing academic achievement and building a good attitude towards science and learning [49]. Electronic cooperation between students is through the Internet through simultaneous communication which is audio and video communication plus remote discussions, or asynchronous communication using e-mail, news boards, forums, file transfers, web pages, and lists of services [50]–[55].

## **4 The methodology**

The descriptive approach was chosen to achieve the objectives of the research, because it is an appropriate approach to research procedures and reaching the results.

The Objective Limits was a cooperative education strategy. Time Limits: the questionnaire was distributed during the period 1/8/2022 until 1/9/2022. Population and Sample: it represents the community of teachers in educational institutions, while the sample is a random sample (132) male and female teachers from Iraqi and Arab universities. The research tool was the questionnaire came in (26) questions, sorted into three axes, the first is the concept of cooperative education (11) question, the second is the preference for cooperative education (9) questions, and the third is the employment of cooperative education (6) questions.

Validity of the tool; The questionnaire was presented to a group of arbitrators from specialized professors in the field of educational and psychological sciences and curricula and teaching methods at the College of Education (Ibn-Rushd), University of Baghdad.

E-Form of the tool; The questionnaire was prepared electronically according to Google Forms (Forms) form <https://forms.gle/DenNMjFBopvSiWpm7> and sent via social media groups (WhatsApp, Viber, Telegram) for teaching educational institutions.

Statistical treatment; To analyse the data statistically, the SPSS statistical package was used in calculating the arithmetic mean, standard deviation, hypothetical mean, T-value, binary analysis of variance, computed and critical value.

#### 4.1 Presentation, interpretation and discussion of the results

It includes a presentation of the results reached by the researchers according to the objectives of their research, and a discussion of those results in the light of the literature and previous studies that were presented, and then presenting the appropriate conclusions, recommendations, and proposals for the current research.

The results can be presented as follows:

**The first objective:** to identify the concept of cooperative education among teachers in educational institutions, and to identify this goal, the researchers applied the cooperative education scale to the research sample, which amounted to (132) male and female teachers. Results of the research showed that the arithmetic mean of the research sample on the scale amounted to (23.962) degrees and with a standard deviation of (5.886) degrees and the hypothetical mean of (14.5) Score, and for the purpose of knowing the significance of the difference between the arithmetic mean and the hypothetical mean, the researchers used the T-test for one sample and the results were as shown in Table 1.

**Table 1.** The arithmetic mean, standard deviation, hypothetical mean, and T-value of the research sample

Variable	Sample	Arithmetic Mean	Hypothetical Mean	Standard Deviation	T-Value		Indication
					Cal.	Tab.	
Cooperative Education	132	23.962	14.5	5.886	7.146	7.146	Meaningful

It was found that the differences were statistically significant at the significance level (0.05), as the calculated t-value amounted to (7.146), which is greater than the tabular t-value of (0.161) and with a degree of freedom (131), and this indicates that the research sample employs the concept of cooperative education during Teaching them to students in educational institutions.

**The second objective:** to identify the preference for cooperative education for teachers of educational institutions according to academic achievement and length of service.

For verifying this goal, the researchers took the responses of the research sample amounting to (132) teaching and teaching staff, and after processing the data statistically, the researchers extracted the average scores of the sample members on the scale of academic achievement (Master’s and Ph’D) and for the period of service (20 and above, 15–20, 10–15, 10–. 5, 5 and below and it was shown in Table 2.

**Table 2.** Arithmetic averages and standard deviations of academic achievement and length of service

Academic Qualification	Duration of Service	Number	Arithmetic Mean	Standard Deviation
<b>PHD</b>	20 years and up	36	26.38	2.707
	15–20 years	22	25.46	2.840
	10–15 years	9	23.33	3.094
	10–5 years	7	25.14	2.790
	5 or less	3	28	3.844
	20 years and up	9	21.33	2.025
<b>Master</b>	20 years and up	9	20.88	2.524
	15–20 years	10	22.7	2.995
	10–15 years	11	23.083	3.046
	10–15 years	16	23.66	3.252
<b>Total</b>	20 years and up	45	25.622	3.684
	15–20 years	31	24.838	3.886
	10–15 years	19	20.631	2.085
	10–5 years	18	22.5	2.584
	5 or less	19	23.684	3.987

To confirm the differences in the perception of distributive justice according to academic achievement and length of service, the researchers used the two-way analysis of variance with interaction, and the results were as shown in Table 3.

**Table 3.** Binary variance analysis with the interaction of academic achievement and length of service

Contrast Source	Sum of Squares	Degrees of Freedom	Mean Squares	Percentage	Indication (0.05)
Academic Qualification	24.019	1	24.019	1.394	Not Meaningful
Duration of Service	535.271	4	133.817	6.906	Meaningful
Academic Qualification Duration of Service	53,367	4	13.341	0.688	Not Meaningful
Error	2422,022	125	19.376		
Total	3034,679	131			

The results of the two-way analysis of variance showed the following data:

1. Academic achievement: it was found that the calculated percentage value of (1,394) is less than the value of the tabular percentage of (3.84) at the significance level (0.05) and two degrees of freedom (1–125), which indicates that there is no Statistically significant differences in the preference for e-learning according to the academic achievement variable.
2. Duration of service: it was found that the calculated percentage of (6.906) degrees is greater than the tabular percentage of (3.00) at a significance level of (0.05) and two degrees of freedom (4–125), and this indicates that there are significant differences Statistical according to the length of service in the cooperative education, and to find out the differences in favour of any length of service, the researchers used a chef’s test and the results were as shown in Table 4.

**Table 4.** Arithmetic averages and calculated and critical Scheffe value

Comparisons	SMA	Calculated Scheffe Value	Critical Scheffe Value	Significance Level (0,05)
20 years and up	15.238	1.891	1.896	Not Meaningful
15–20 years	17.129			
10–15 years	15.238	3.620	1.368	Meaningful for 5–10 years
10–5 years	18.858			
5 or less	17.129	1.729	1.752	Not Meaningful

It is evident from the above table that:

1. There is no difference between the length of service (20 and above) and (15–20 years) in cooperative education, since the calculated level of health (1,891) is less than the critical value of (1,896), and this means that the owners of the service period are 20 and above and 15–20 years Equal in the employment of cooperative education.
2. There is a difference between the length of service (10–15 years) and (5–10) years in the employment of cooperative education and in favour of the service period

(10–5 years) because the calculated Scheffe value (3,620) is greater than the critical Scheffe value of (1,368), and this means that Those with a service period of (10–5) years have more employment for cooperative education than those with a service period of (10–15) years.

3. There is no difference between the length of service (5 years or less) in the employment of cooperative education, since the calculated level of skill (1,729) is less than the critical value of (1,752). Educational.
4. Gender \* length of service: it was found that the value of the calculated percentage value (0.688) for the interaction between (Gender\* length of service) is smaller than the tabular percentage value of (3.00) at a significance level (0.05) and two degrees of freedom (4–125), which indicates that there are no statistically significant differences depending on the interaction between academic achievement and duration of service.

**The third objective:** to identify the importance of employing teachers of cooperative education in the educational, social and psychological aspects. To identify this goal, the researchers applied the scale of cooperative education to the research sample of (132) male and female teachers, and the arithmetic mean and standard deviation of the research sample scores and each of the three aspects were extracted, and for the purpose of knowing the significance of the difference between the arithmetic averages and the hypothetical average for each field, the researchers used T-test for one sample and the results were as shown in Table 5.

**Table 5.** Arithmetic mean, standard deviation, and T-value of the research sample on the scale of cooperative education in the three aspects

Three Aspects	Sample	Arithmetic Mean	Std. Dev.	Hypothetical Mean	T-Value		Indication
Educational Aspect	132	17.450	3.886	10.5	8.916	0.161	Meaningful
Social Aspect	132	21.745	4.911	10.5	10.784	0.161	Meaningful
Economic Aspect	132	32.715	7.031	12	11.496	0.161	Meaningful

By noting Table 5, the results were as follows:

1. The arithmetic mean of the educational side was (17,450), standard deviation (3,886), hypothetical mean (10.5), and the calculated T-value amounted to (8,916), which is greater than the tabular value of (0.161) at the significance level (0.05) and the degree of freedom (131). This means that the research sample has the use of cooperative education in the educational aspect.
2. The arithmetic mean for the social aspect was (21,745), standard deviation (4,911) and hypothetical mean (10.5) and the calculated T-value amounted to (10,784), which is greater than the tabular value of (0.161) at the significance level (0.05) and the degree of freedom (131). This means that the research sample prefers the social aspect.
3. The arithmetic mean for the economic side was (32,715), standard deviation (7,031), hypothetical mean (12), and the calculated T-value amounted to (11,496), which

is greater than the tabular value of (0.161) at the significance level (0.05) and the degree of freedom (131). This means that the research sample prefers the economic aspect.

## 5 Conclusion

1. The most important cooperative learning groups are: the formal cooperative educational groups, the informal educational cooperative groups and the basic cooperative educational groups.
2. The role of the teacher in cooperative education revolves around several tasks. One of the most important of these tasks is choosing the topic and headlines, setting goals, as well as organizing and managing the basis, and others.
3. The most important factors that contribute to the success of cooperative education are: classroom discipline, availability of sufficient time to complete cooperative learning lessons, class size and organization, number of class students, and others.
4. The teachers in educational institutions enjoy a high level of employment of cooperative education in their teaching setting.
5. There are no statistically significant differences in the preference for e-learning according to the academic achievement variable.
6. There are statistically significant differences according to the length of service in cooperative education, and they were in favour of the teachers whose service period is between (10–15) years.
7. As for the preference, the three aspects in the employment of cooperative education were all significant and used in all aspects.

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