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A Quantitative Study of Ausubel's Teaching Method on Students' Learning and Academic Self-efficacy in the English Language Course

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ABSTRACT

The present quasi-experimental study aims to investigate whether Ausubel's model of teaching is effective in improving students' English learning (Vocabulary) and in boosting students' academic self-efficacy in their English course or not. The sample consisted of 52 students of a language institute in Kerman who were selected based on a convenience sampling method. The instruments included a pretest and posttest with unequal control and experimental groups, and a self-efficacy questionnaire. Results of Covariance Analysis (ANCOVA) indicated that Ausubel's teaching method is effective in improving students' English learning. The results also revealed a significant difference between the posttests of both groups, which means that the intervention (Ausubel's model) had a positive effect on students' learning process and their academic self –efficacy in the English course. Findings can be very effective and efficient for teacher trainers, English language learners and teachers in using Ausubel's teaching method in the EFL context.

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1. Introduction

Academic self-efficacy is one of the important factors influencing academic performance. Self-efficacy beliefs lead to the individuals' excellent performance through increasing commitment, endeavor ,and perseverance. The learners with high

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levels of self-efficacy attribute their failures to lower attempts rather than lower ability, while those with low self-efficacy attribute their failure to their low abilities. Therefore, self-efficacy can influence the choice of tasks and perseverance while doing them. In other words, students with low self-efficacy are more likely to be afraid of doing their tasks, avoiding, postponing, and give them up soon. Students with high self-efficacy often display greater performance comparatively to those with low efficacy. Self-efficacy is also equated with self-competence, hence significant authorities such as parents and teachers who exert great influences should play their role efficiently in enhancing this self-competence and eventually self-efficacy for it has great bearings in achievement, be it in the English language or any other subjects.

Teaching English well requires using different strategies like teaching methods and techniques that help students learn better. The goal is to find new and better ways to teach English. To do this, we can use fun and important things to help students learn based on their age and where they live. We can also consider their emotions and how they interact with others. Ausubel's theory is about making English teaching fun and meaningful. Ausubel thought that you can understand things by using deductive reasoning to figure out the big ideas and rules. He thought that it's better to understand what you're learning instead of just memorizing it without understanding. The most important thing that affects learning is what the learner already knows. This made Ausubel create a theory about learning that makes sense and plans to help learning (Rhalmi, 2011). Ausubel (2000) also believes that students can learn more by using advanced organizers and intentionally producing new knowledge. This will help expand their understanding. TAC helps you learn in a way that makes sense. It uses strategies like the advanced organizer, which helps organize new knowledge, and the progressive differentiation, which makes complex ideas easier to understand. When you use these strategies along with metacognition, they form the concept map that helps you learn better (Tian et al., 2020).

Teaching English well depends on many things, like how prepared the teacher is, what the students already know, the materials used, and how much the students want to learn. The students need to talk about their past experiences in their own language. They will use the new language in many ways in their daily life (Agra et al., 2019). Ausubel's ideas were useful for new discoveries in how the mind works and thinks. The evidence from real-life experiences shows that how we think, learn and develop is connected to how we teach and share knowledge. Teaching based on concepts, which was used before, is a way of teaching that has been found to improve how students learn. This idea comes from a way of teaching and learning called constructivism. It uses Ausubel's theory of meaningful learning and how to combine important knowledge to help teachers understand, use, and test teaching based on concepts. The student is expected to actively participate and take responsibility for their learning.

Nowadays, it is almost accepted that vocabulary learning is a vital component of acquisition of individual’s native language and learning a foreign language (Morra et al., 2009, cited in Bagheri Masoudzade & Fatehi Rad, 2022). When learning a new language, mastering a subskill i.e., vocabulary can be a great challenge that requires dedicated tools and methods to help the learners become competent in these aspects of language. Moreover, with the introduction of various new methods of teaching English that are based on the learner instead of the teacher, different tools are used to facilitate the learning process (Shekarian Behzadi & Bagheri Masoudzadeh, 2022). More importantly, teaching English to non-native speakers is definitely difficult. In fact,

teaching English to EFL learners involves creating opportunities for meaningful communication. The goal is not only to develop linguistic skills but also to empower learners to use English as a tool for education. That is to say, teaching vocabulary requires effective strategies that go beyond simple memorization, focusing instead on helping students understand word meanings, usage, and context. The possible challenges make it essential for educators to use a variety of communicative approaches, strategies and teaching methods to ensure learners not only understand but also feel confident applying English in real-life situations (Zeng et al., 2025).

De Souza et al. (2021) found that people learn by using their thinking, feeling, physical, and memory skills. These skills help them understand complex ideas and make sense of the world around them. The more they use these skills, the more they learn and understand. In the process of teaching and learning English, Ausubel (2000) believes that the past experiences of learners, no matter how old they are, are important for them to pay attention and remember recent and past information. But the issue is how Ausubel's way of teaching affects how students learn and how confident they feel about their schoolwork. So, the current research attempted to search the effectiveness of Ausubel's teaching method on learning (Vocabulary) and academic self-efficacy of students in an English course. To do this, the following questions have been formed:

Research Question 1: What is the influence of Ausubel's teaching method on EFL learners' vocabulary?

Research Question 2: What is the influence of Ausubel's model on EFL students' academic self-efficacy?

Research Question 3: Are there any useful principles for EFL teaching and learning based on Ausubel's model of teaching?

2. Review of Literature

Abdali (2006) looked at how using different teaching methods in biology class affected how well first grade high school students did on tests and how much they remembered later. The scientist chose 58 students in the first grade of high school for the study. They were split into two groups: one group that tried something new and one group that did not. Next, the researcher made teaching materials based on the methods used and created a test with multiple choice questions to measure students' success. The research showed that there were no big differences in the grades of students who studied using Gagne's method and those who studied using Ausubel's method. Al-Zubaidi (2011) also checked if people remember things better if they learn them in a certain way, according to Ausubel's theory. The study found that it's important to remember what you learn in school. The advance organizers are important for planning the steps of teaching. The study showed that it is important to consider the learners' background when trying to help them remember what they have learned. It also helps to remember things for a longer time. Moreover, Khathlan (2012) created a computer curriculum for high school students using ideas from Ausubel and Brunner theories. The group included 60 high school students. These students were split into two groups; one to try something new and the other to stay the same. The study discovered that when the lessons were planned using Ausubel and Brunner's theories, they had a positive impact on how students felt about using computers. In the same year, Khajavi and Katebi (2012) analyzed the influence of concept mapping on reading comprehension and self-efficacy of intermediate EFL students. A randomized pre-test post-test control group design with a concept mapping group and a traditional method group was employed. The concept

mapping group and the traditional method group were administered pre-tests in reading comprehension and self-efficacy. At the conclusion of the training, all participants again completed the achievement test as well as self-efficacy scale. After controlling the effects of pre-test scores, results of ANCOVA revealed that students in the concept mapping group showed greater achievement in reading comprehension and self-efficacy than students in the traditional method strategy group.

Al Tamimi (2017) looked at how using Ausubel's assimilation theory and the metacognitive strategy (K. WL) can help second grade middle school students learn statistics and probability better. They wanted to see how it would improve the students' math skills and communication. The students separated into two different groups for the experiment. The first group was taught using Ausubel's method, the second group was taught using the K. WL strategy, and the third group was taught using the regular way. The results found that the first and second groups did better than the control group. Therefore, this shows that these two methods are effective in teaching. In another study, Alipour (2020) examined how three different ways of teaching grammar can help people learn passive sentences better. There were 80 Persian-speaking learners in 4 intact classes at Iran Language Institute. One group in the experiment was given Intralingual advance organizers. The second group got help with understanding different languages, and the third group was given material with extra text. The posttest results showed that there was a big difference between all the groups, and that all the treatments worked well. In the same year, Boroumand et al. (2020) examined the influence of explicit teaching and utilization of concept mapping on Iranian EFL students' listening achievement and perceived self-efficacy. The participants assigned into two groups, namely control and one experimental group, each including thirty participants. The students in the experimental group were trained to utilize concept mapping while doing their routine listening tasks. The findings indicated that the experimental group performed significantly better in the listening achievement test after learning to use a concept-mapping strategy. Likewise, their perceived self-efficacy in accomplishing listening tasks improved after the intervention period.

Shirazi et al., (2021) looked at how using concept maps based on Ausubel's theory could help students from failing in school during the coronavirus pandemic. They compared two groups of 30 third graders to see if a certain test would make a difference. The study found that using a concept map helps people remember information better than not using one. In the same vein, De Souza et al., (2021) mentioned that there are many ways to teach English using different methods and strategies. This involves considering the student's background, culture, age, and emotions. The student is the most important person in this situation. They are responsible for learning new things. The English teacher will help them, using fun activities to make learning as good as possible.

Javdan et al., (2023) have done a study to see if teaching metacognitive techniques can help students. The results indicated that there is not a big difference between the two groups in English learning. Basically, teaching students how to think about their own thinking happens in person and over time, and it's most effective when they use these skills in real life. Teaching metacognitive skills online doesn't really help these students. Additionally, Hosseini Dinani and Chalak (2023) investigated the effect of one strategy in vocabulary learning which is mobile-assisted concept mapping on self-regulation capacity and vocabulary acquisition. Mind Meister was utilized to draw maps in learning vocabulary. Two experimental groups received concept mapping materials

as treatment, and the third group was considered the control group. The results indicated that both concept mapping and conventional methods effectively improved vocabulary acquisition, but the participants' enhancement in vocabulary acquisition in the experimental group was more significant. In a more recent study, Aburumman and Al-Khawaldeh (2024) explored the effect of advance narrative organizers on the achievement of EFL sixth grade male students' narrative writing and their motivation towards it, in comparison with the conventional method implemented in teaching English language writing in Al-Salt Governorate using a quasi-experimental design. The results indicated that there were statistically significant differences in the narrative writing mean scores of sixth grade students ascribed to the use of Advance Narrative Organizer. They also revealed that there were few differences, though not statistically significant, in the student's motivation towards narrative writing ascribed to the instructional method. The study revealed a positive effect of narrative organizers in improving narrative writing skill among sixth-grade students and so recommends the use of narrative organizers in improving this skill.

While several studies have highlighted the effectiveness of different teaching strategies—such as concept mapping, metacognitive strategies, grammar instruction methods, and narrative organizers in improving EFL learners' comprehension, writing, or self-efficacy, relatively little attention has been given to systematically examining Ausubel's teaching method in the specific context of English language courses. While Ausubel's assimilation theory has been applied successfully in other disciplines (Al Tamimi, 2017), its potential in enhancing both language learning outcomes and learners' academic self-efficacy remains underexplored. Moreover, previous studies have often focused on isolated skills (e.g., reading, listening, grammar, or writing) rather than the broader impact of teaching methods on learners' overall English language achievement and their self-belief in handling academic tasks. Therefore, the present study is distinctive in its attempt to integrate Ausubel's approach into English language teaching and to empirically investigate its dual impact on both learning performance and self-efficacy, addressing an important gap in the literature.

3. Theoretical Framework

David Paul Ausubel was a smart American psychologist who made important contributions to the fields of education, thinking, and science education. Ausubel thought that you can understand things by using deductive reasoning to figure out the big ideas and rules. He thought that it's better to understand what you're learning instead of just memorizing it without understanding. The most important thing that affects learning is what the learner already knows. This made Ausubel create a theory about learning that makes sense and plans to help learning (Rhalmi, 2011).

Safdar et al. (2012) believes that if teachers learn how to make concept maps and use them in their lessons, they can help students learn to use concept maps to organize their thoughts. He also suggests that it's best for teachers to work in groups to make concept maps together. The people in the group can look at and discuss the creation of their concept maps. After that, they can also compare their maps with the ones made by Safdar et al. those from different groups. Finally, people need to make and show their own map of ideas for a science class. Ebenezer and Connor (1998), produced a list to construct a concept map:

- Choose a passage from a science textbook.
- Circle or underline the main concepts in this passage.

- List all the concepts on paper.
- Write or print the concepts on small cards or stickers so that the concepts can be moved around.
- Place the most general or all-inclusive concept on the top of the paper.
- Arrange the concepts from top to bottom (from most general at the top to most specific at the bottom) so that a hierarchy is indicated. In constructing this hierarchy, place concepts next to each other horizontally if they are considered to have equal importance or value.
- Relate concepts by positioning linking verbs and connecting words on directional arrows.
- Support the concepts with examples.
- Have members of a cooperative group critically analyze the concept map to improve on and further extend your ideas.

4. Methods

This section describes the research methods used to investigate students' language learning and academic self-efficacy. It gives an overview on the methodology of the study, and covered all the processes and procedures involved in conducting this research. This part includes information about the research design procedures. In addition, it described the respondents of the study, the instruments used in gathering the data, data collection procedures, and the methods employed in analyzing the data.

4-1. Research Design

To meet the requirements of the present study, a quasi-experimental study using pretest and posttest with unequal groups was used. To measure the effect of independent variable (Ausubel's Teaching Method) on dependent variable (the students' learning and academic self-efficacy, the pretest and posttest was conducted for both control and experimental group under a consistent and standardized condition.

4-2. Participants (or Sample)

The statistical population consists of totally 52 EFL students of Asia language institute in Kerman who were selected based on convenience sampling method in the academic year 2024-2025. The convenience sampling method was chosen because the researchers had easy access to the students. This method was practical in terms of time, cost, and availability of participants. Since the researchers have been teaching there for some years, they were allowed to collect the required data quickly and efficiently without the need for complex sampling procedures. The participants were EFL students of both genders and their age rage was between 19 and 23. The participants were considered as elementary level learners based on the profiles of the learners in the institute. 25 students were selected as the control group and 27 students selected as the experimental group.

4-3. Data Collection Instruments

To meet the requirements of the present study, a pretest and posttest with unequal groups was used. At the beginning of the study, a valid and reliable pretest designed by some experts was conducted to both control and experimental group under a consistent

and standardized condition in order to measure the English knowledge before implementing the Ausubel's teaching method. After training program to the experimental group under a consistent and standardize condition, a valid and reliable posttest designed by some experts was conducted to both experimental and control group. Moreover, the reliability coefficient is 0.97 and 0.78 for the pretest and the posttest respectively based on Cronbach's Alpha. It means that the pretest is excellently reliable and the posttest has a good reliable coefficient.

The "English Self-Efficacy Scale," developed by Yanar and Bümen (2012), was used twice before and after treatment in order of investigating student's academic self-efficacy. This scale has 5 items with a five-point Likert scale. The minimum score of this questionnaire is 5 and the maximum score is 25. |it is worthy to note that the face and content validity were examined using the opinions of some experienced professors. Besides, Cronbach's Alpha is reported 0.96, indicating that the questionnaire has an excellent coefficient of reliability.

4-4. Data Collection Procedure

In this research, two methods are used to collect the required data and information.

Quasi-Experimental method: From the two selected classes, one class was named the control group and the other class was named the experimental group. The pre-test with questions about the chosen topic from their English textbook, American English File 1 (teaching vocabulary related to continents, countries, nationalities and different languages of the world) was given to the control and test group. Its validity was confirmed by several question design experts. The answers were listed in two separate tables titled the control group's pretest answers and the experimental group's pretest answers. Then, in a 60-minute session, the control group was taught the chosen subject in a usual way. Then, according to the schedule, in a 60-minute session, the same chosen topic was taught to the experimental group using the Ausubel method. After one week, the posttest extracted from their textbook whose validity was also confirmed by several question design experts was taken from both groups. Their answers were listed in two separate tables titled the control group's posttest answers and the experimental group's posttest answers. The steps of teaching Ausublel's model in the case of the experimental group were carried out as follows:

Step 1 (advance organizer): The teacher determines the lesson's aim. He writes the aim on the whiteboard:" Knowing about continents, countries, nationalities, different languages of the world." Then, some advance organizers are presented. They include: 1) a world map, 2) color pictures of people from different nationalities such as Iranian, Japanese, American, Chinese, Arabic, African, English, French, etc., and 3) a table with four columns: country, nationality, language and continent. This table has ten rows. The first row has been completed by the teacher himself with the country (Iran), nationality (Iranian), language (Persian) and continent (Asia) in Farsi language.

Step 2(presentation of learning task of material): The teacher asks the students to look at the pictures of people and the world map. The students are asked to find the country of each picture on the map. They, also, are asked to complete the rest of the table.

Step 3(Strengthening cognitive organization): the students are asked to relate new information to advance organizer and promoting reception learning.

Data from the Questionnaire: The pretest questionnaire was given to the control group and the experimental group. The answers were listed in two separate tables. After

the implementation of Asubel's teaching method, the posttest questionnaire was given to both groups and the answers were listed in two separate tables.

4-5. Data Analysis

To analyze the data, descriptive and inferential statistics were used. In descriptive statistics, indicators such as mean and standard deviation were used. In inferential statistics, the researchers used tests such as Analyze of Covariance (ANCOVA) with SPSS 20 software.

5. Results

5-1. Ausubel's Model of Teaching

According to Ausubel's Theory, the most important factor in learning is what the student already knows. This is where learning should begin. In this sense, unraveling what the student already knows is more than identifying their representations, concepts and ideas, because it requires consideration of the totality of the cultural/social being in their manifestations and bodily, affective and cognitive languages. For this, the teacher must be open so that the student can reveal their lived expectations, the objects incorporated in their life, the existential conditions and not only the intellectual aspect. Ausubel believes that in order for students to learn well, they need to connect new information to what they already know. He suggests using an advance organizer to help students connect their thoughts with new information or ideas. Ausubel's theory says that when we learn new things, we can connect them to things we already know. These new ideas are like a plan to help us understand new things better. Advance organizers can be words, pictures, or questions used to help people understand new information better. In simple words, the advance organizer helps people learn new information by giving them a mental framework to build on.

Advance organizers are concepts given to students prior to the material actually to be learned to provide a stable cognitive structure in which the new learning can be subsumed. These organizers are introduced in advance of learning itself, and are also presented at a higher level of abstraction, generality, and inclusiveness. Ausubel emphasizes that advance organizers are different from overviews and summaries which simply emphasize key ideas and are presented at the same level of abstraction and generality as the rest of the material. Advance organizers serve three purposes: (1) They direct attention to what is important in the coming material; (2) They highlight relationships among ideas that will be presented; (3) They remind the students of relevant information already in memory. After presenting an advance organizer, the next step in Meaningful Learning is to present content in terms of basic similarities and differences by using specific examples. To learn new material, students must comprehend the similarities between the material presented and what they already know. They must also see the differences so that confusion can be avoided. Along with the comparisons, specific examples must come into play.

5-2. Findings of Pretest and Posttest

First, the pretest was taken from both the control and experimental groups, then the subject was taught using the normal method and the Ausubel method respectively. After a week, the posttest was taken from both groups and the results are listed in Table 1.

Table 1
Results of Pretest and Posttest

Design	Group	Number	Mean	Std. Deviation
Pretest	Control	25	8.16	3.41
Pretest	Experimental	27	9.20	3.47
Posttest	Control	25	12.00	2.84
Posttest	Experimental	27	14.92	2.15

T-test was used as a statistical procedure to determine whether mean difference of the pretests is insignificant ($P > 0.05$) or significant ($P < 0.05$). To apply this test, mean, standard deviation (SD), and standard error mean were used. The results are shown in table 2.

Table 2
Results of T-test

Design	Mean Difference	Bootstrapa				
		Bias	Std. Error	Sig. (2-tailed)	95% Confidence Interval	
					Lower	Upper
pretest1	-1.04	-.00	0.62	0.15	-2.51	0.01
pretest2	0.00	0.05	0.62		-1.40	1.05

As can be seen from table 2, the sig ($0.15 \geq 0.05$). So, the mean difference is not significant and the suitable method of analyzing is Covariance analysis. In other words, the posttest scores are included as a dependent variable, the groups as an independent variable, and the pretest scores as a covariate variable.

The covariance analysis was performed and the results show that there is not a significant level between the pretest and the groups because the significant level was $0.57 \geq 0.05$. This means that the pretest has the same effect on both the control group and the experimental group and affects the dependent variable equally. So, the assumption of the homogeneity of the regression slope is observed.

Table 3
Results of ANCOVA Analysis

Dependent Variable: Posttest					
Source	**Type III Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Corrected Model	301.87[a]	3	100.62	37.10	0.00
Intercept	541.87	1	541.87	199.79	0.00
Groups	16.29	1	16.29	6.00	0.01
pretest	211.18	1	211.18	77.86	0.00
Groups * pretest	0.88	1	0.88	0.32	0.57
Error	130.18	48	2.71		
Total	9721.00	52			
Corrected Total	432.05	51			

Table 4 shows that the significance level is less than 0.05(0.00≤0.05) and indicates that there is a significant difference between the posttest of the experimental group and the control group. This means that the intervention (Ausubel' model) had a positive effect of 34% on English learning.

Table 4
The size of Effect

Dependent Variable: posttest						
Source	**Type III Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**	**Partial Eta Squared**
Corrected Model	300.99[a]	2	150.49	56.26	0.00	.697
Intercept	550.15	1	550.15	205.67	0.00	0.80
pretest	211.22	1	211.22	78.96	0.00	0.61
Groups	68.00	1	68.00	25.42	.00	0.34
Error	131.06	49	2.67			
Total	9721.000	52				
Corrected Total	432.05	51				

5-3. Questionnaire Findings

In order to measure academic self-efficacy, the standard questionnaire was given to both groups before the treatment as the pretest questionnaire and after the treatment as the posttest questionnaire. The results are listed in the following tables.

Table 5
Results of Control Group's Pretest Answers

Variables	Mean	Std. Deviation	N
q1	10.80	5.33	25
q2	11.20	5.64	25
q3	8.20	3.50	25
q4	12.56	6.35	25
q5	17.00	6.12	25

Table 6
Results of Control Group's Posttest Answers

Variables	Mean	Std. Deviation	N
q1	11.29	5.11	27
q2	12.03	5.59	27
q3	10.37	4.78	27
q4	12.22	5.43	27
q5	16.29	6.29	27

5-4. Results of T-test

The T-test was used as a statistical procedure to determine whether mean difference of the pretests is insignificant (P > 0.05) or significant (P < 0.05). To apply this test, mean, standard deviation (SD), and standard error mean were used. The results are shown in table 7.

Table 7
Results of T- test for the Pretests

Group	Test Value = 12.44					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Control	-.337	4	.75	-.48	-4.50	3.52
Experimental	.004	4	.99	.004	-2.81	2.82

Table 7 shows values 0.75 and 0.99 for the control group's pretest and the experimental group's pretest respectively indicating that they are more than 0.05 level and are insignificant. So, the suitable method of analyzing is Covariance analysis (ANCOVA). In other words, the posttest scores is included as a dependent variable, the groups as an independent variable, and the pretest scores as a covariate variable.

Table 8
Results of Exp. Group Pretest Answers

Variables	Mean	Std. Deviation	N
q1	13.80	5.82	25
q2	14.20	6.06	25
q3	8.00	4.56	25
q4	9.60	2.85	25
q5	16.40	5.86	25

Table 9
Results of Exp. Group Posttest Answers

Variables	Mean	Std. Deviation	N
q1	19.25	3.84	27
q2	18.33	4.80	27
q3	15.37	7.32	27
q4	19.44	5.93	27
q5	16.11	4.87	27

Table 10
Scale Statistics Related to Questionnaire Variables

Variables	Design	Group	Number	Mean	Std. Deviation

Self-Efficacy	Pretest	Control	25	59.76	25.62
	Pretest	Experimental	27	62.22	25.20
	Posttest	Control	25	62.00	22.26
	Posttest	Experimental	27	88.51	23.85

Table 10 shows the mean and standard deviation of the self-efficacy variable. Accordingly, comparing the experimental group to the control group, there can be seen a remarkably greater increase in the mean scores in the experimental group regarding the self-efficacy factor.

5-5. Covariance Analysis (ANCOVA)

The covariance analysis was performed and its results are listed as follows. Table 11 shows that there is not a significant level between the pretest and the groups because the significant level was $0.20 \geq 0.05$. This means that the pretest has the same effect on both the control group and the experimental group and affects the dependent variable equally. So, the assumption of the homogeneity of the regression slope is observed.

Table 11
Results of ANCOVA Analysis

Dependent Variable: Posttest					
Source	**Type III Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Corrected Model	95.52a	3	31.84	5.16	.042
Intercept	47.56	1	47.56	7.70	.032
Groups	24.66	1	24.66	3.99	.093
pretest	4.74	1	4.74	.76	0.41
Groups * pretest	12.38	1	12.38	2.00	0.20
Error	37.02	6	6.17		
Total	2398.13	10			
Corrected Total	132.55	9			
a. R Squared = .72 (Adjusted R Squared = .58)					

Table 12 shows that the significance level is less than 0.02(0.00≤0.05) and indicates that there is a significant difference between the posttest of the experimental group and the control group. This means that the intervention (Ausubel' model) had a positive effect of 34% on students' self-efficacy in their English course.

Table 12
Tests of Between-Subjects Effects

Dependent Variable: Posttest						
Source	**Type III Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**	**Partial Eta Squared**
Corrected Model	83.14a	2	41.57	5.89	0.03	0.62
Intercept	36.58	1	36.58	5.18	0.05	0.42
pretest	12.82	1	12.82	1.81	0.22	0.20

Groups	63.91	1	63.91	9.05	0.02	0.56
Error	49.40	7	7.05			
Total	2398.13	10				
Corrected Total	132.55	9				
a. R Squared = .62 (Adjusted R Squared = .52)						

6. Discussion

By carefully studying and reviewing the previous research on Azobel's teaching method, it seems that there is a collective consensus that this method is not only effective in improving the academic progress of students in English learning, but also in almost all educational fields. For example, Al Tamimi's study (2007)) on the effect of using Ausubel's assimilation theory and the metacognitive strategy (K.W.L) in teaching statistics and probability unit for students of second grade – middle school students' achievement and mathematical communication, showed significant differences in achievement for the first and the second experimental group compared to the control group. Hence, this demonstrates the effectiveness of these two methods in teaching statistics and probability unit. In Macdragh's research (2001), Prior knowledge had a significant impact on students' achievement of concept of science. His findings confirmed the effectiveness of Ausubel's model of teaching that emphasizes on the concept mapping. Ausubel believes that concept maps are useful tools to help students learn about their knowledge structure and the process of knowledge construction. In this way, concept maps also help the student learn, how to learn (meta-learning).

The library documents emphasize on Ausubel's belief in understanding concepts, principles, and ideas through deductive reasoning. Additionally, Ausubel advocates for the concept of meaningful learning rather than memorization without understanding. The most important single factor influencing learning is what the learner already knows. This led Ausubel to develop an interesting theory of meaningful learning and advance organizers. Meaningful Learning is considered the essence of Ausubel's strategy. Thus, it is intended to: link the new information and prior knowledge to learner's cognitive structure. This is such that the new information will be of the same quality with regards to the cognitive structure or similar. In short, in order to take advantage of all the ideas of the related library documents and to reach a level of efficiency in teaching and learning English language, it is necessary to think about each student or group individually; each individual's individuality, tastes, activities, background knowledge, and etc. must be taken in consideration when as English teacher want to opt a useful model of teaching. Thus, the foreign language will be a pleasant and meaningful part in the life of each person, who goes to the classes of a teacher who manages to unite the methods, rules and practices, with the social, individual and the active.

In order to investigate the effectiveness of Ausubel's model, the researchers used a quasi-experimental method applying the pretest and posttest design with unequal groups (control and experimental group). Analyzing the results of the pretest and posttest indicated that both the pretest and posttest had an excellent reliability value which were 0.97 and 0.78 respectively. It means that the results are reliable. T –test showed the sig ($0.15 \geq 0.05$). It means that pretest has the same effect on both the control group and the experimental group. It affects the dependent variable equally. Covariance Analysis (ANCOVA) showed a value for F ($3.25 \geq 3$) indicating that the null hypothesis is

rejected and the opposite hypothesis is accepted. So, Ausubel's teaching method is effective in improving students' English learning. Covariance Analysis (ANCOVA) also showed that the significance level is less than 0.05 indicating that there is a significant difference between the posttests for both the experimental group and the control group. This means that the intervention (Ausubel's model) had a positive effect of 34% on learning English. F number of 25.42 for groups indicates that the intervention (Ausubel's model of teaching) improves the learning process.

The descriptive information related to questionnaire variables showed that the mean for the experimental group's posttest questionnaire is more than the control group's posttest questionnaire ($88.51 \geq 62.00$). It means that the dependent variable (academic self- efficacy) is boosted by the intervention (Ausubel's model). Covariance Analysis showed that there is not a significant level between the pretest and the experimental group because the significant level was $0.20 \geq 0.05$. This means that the pretest has the same effect on both the control group and the experimental group that affects the dependent variable equally. Also, the F value ($9.05 \geq 3$) obtained for the groups indicates the rejection of the null hypothesis and the acceptance of the opposite hypothesis. Therefore, it can be said that the use of Ausubel's method has had a positive effect on the students' self-efficacy and has raised it in English language course.

It is worthy to note that the results of the current study are in line with the findings of some previous studies. For example, Khathlan (2012) discovered that when the lessons were planned using Ausubel and Brunner's theories, they had a positive impact on how students felt about using computers. Khajavi and Katebi (2012) also revealed that students in the concept mapping group showed greater achievement in reading comprehension and self-efficacy than students in the traditional method strategy group. Moreover, Khoshsima et al. (2016) found that the concept mapping strategy in vocabulary learning positively affects learners' attitudes toward vocabulary learning. Furthermore, Al Tamimi (2017) reported that using Ausubel's assimilation theory and the metacognitive strategy can help students learn statistics and probability better. The results are also compatible with Boroumand et al. (2020), who reported that teaching and utilization of concept mapping had positive effect on Iranian EFL students' listening achievement and perceived self-efficacy. Besides, Shirazi et al., (2021) stated that using concept maps based on Ausubel's theory could help students from failing in school during the coronavirus pandemic. The results of this study also support the two recent studies done by Hosseini Dinani and Chalak (2023) and Aburumman1 and Al-Khawaldeh (2024). They respectively indicated that concept mapping as well as conventional methods effectively improved vocabulary acquisition, and they focused on the positive effect of advance narrative organizers on the students' narrative writing and their motivation.

However, the results of the present research are not in line with the study conducted by Naderifar (2018) who found no difference between the concept mapping strategy and notebook-keeping strategy regarding their impact on self-regulation in acquiring vocabulary. Abdali (2006) also reported no differences in the grades of students who studied using Gagne's method and those who studied using Ausubel's method.

7. Conclusion

The results of this research showed that the use of Ausubel's model of teaching had a positive effect on the English language learning. As the validity and the reliability of the

pretest and the posttest were acceptable, the results obtained from this study can be generalized to other EFL students. Ausubel's model helps students to learn meaningfully. students are able to relate new knowledge (concepts) proposition, rule, principles) to what they already know. The advance organizer helps students link their ideas with new material or concepts. Ausubel's theory claims that new concepts to be learned can be incorporated into more inclusive concepts or ideas. These more inclusive concepts or ideas are advance organizers. Advance organizers can be verbal phrases, a graphic, a model, or a question. In any case, the advance organizer is designed to provide, what cognitive psychologists called "mental scaffolding" to learn new information. Ausubel emphasizes that advance organizers are different from overviews and summaries which simply emphasize key ideas and are presented at the same level of abstraction and generality as the rest of the material. Advance organizers serve three purposes: (1) They direct attention to what is important in the coming material; (2) They highlight relationships among ideas that will be presented; (3) They remind the students of relevant information already in memory. After presenting an advance organizer, the next step in Meaningful Learning is to present content in terms of basic similarities and differences by using specific examples. To learn new material, students must comprehend the similarities between the material presented and what they already know. They must also see the differences so that confusion can be avoided. Along with the comparisons, specific examples must come into play.

Self-efficacy leads to the individuals' excellent performance through increasing commitment, endeavor, and perseverance. The learners with high levels of self-efficacy attribute their failures to lower attempts rather than lower ability, while those with low self-efficacy attribute their failure to their low abilities. Therefore, self-efficacy can influence the choice of tasks and perseverance while doing them. In other words, students with low self-efficacy are more likely to be afraid of doing their tasks, avoiding, postponing, and give them up soon. Students with high self-efficacy often display greater performance comparatively to those with low efficacy. Self-efficacy is also equated with self-competence, hence significant authorities such as parents and teachers who exert great influences should play their role efficiently in enhancing this self-competence and eventually self-efficacy for it has great bearings in achievement, be it in the English language or any other subjects.

As many students, particularly who are learning English in an EFL context, confront many problems in learning English especially for the lake of self-efficacy and lake of mastery in applying language. Therefore, it is recommended that EFL teachers consider the current research regarding the principles of Ausubel's' model of teaching and apply this model according its principles in their English classrooms if they want their students to be successful in English learning and rely on their self-efficacy in English course.

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Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

Disclosure of AI Use in Manuscript Preparation

During the preparation of this manuscript, the authors did not use any AI tools. They accept full responsibility for the accuracy, integrity, and originality of the final work.

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