

# **Impact of Using Some Active Learning Strategies in a Curricula and Teaching Methods Course on the Learning Motivation Level and the Development of Critical Thinking Skills Among the Students of the Faculty of Arts at Al-Zaytoonah University**

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*This study aimed at identifying the impact of using some active learning (AL) strategies in a Curricula and Teaching Methods Course on the learning motivation level and the development of Critical Thinking Skills among the Faculty of Arts at Al-Zaytoonah University (ZUJ) students. The study subjects were (61) male and female students selected from the Curricula and Teaching Methods Course of the Faculty of Arts at ZUJ. The study adopted the quasi-experimental approach. To answer the two questions of the study, the Learning Motivation Scale consisting of (35) paragraphs, and the Critical Thinking Skills Test consisting of (34) paragraphs were constructed. The study results revealed that there are significant differences between the means of the scores of the students of the Curricula and Teaching Methods course between the experimental group and the control group on the Learning Motivation Scale and the Critical Thinking Skills Test that can be attributed to using AL strategies. Therefore, the researcher recommended the use of learning outcomes related to learning motivation and critical thinking skills.*

*Keywords: active learning strategies, curricula and teaching methods course, critical thinking skills, learning motivation*

## **INTRODUCTION**

For several decades, the world has witnessed accelerated progress in various aspects affecting man. This has led to a huge knowledge revolution unprecedented in human history. Like other societal components, such cognitive and technical developments have cast their shadow on the world's educational systems, to keep up with such developments and benefit from them in developing their educational system, to improve the outcomes of the educational process. The educational institutions organize and supervise these outcomes through modern teaching methods and strategies, which require an educational environment rich in stimuli, which educators hope may help activate students' role and make them active participants in the learning process instead of role learning.

The results of educational research have shown that traditional lecturing, through which the instructor provides knowledge to students who only listen to what the instructor says, is mostly prevalent. The fact that this method does produce AL has led to the emergence of repeated calls to develop teaching methods that increase students' effective learning, where learners get immersed in reading, writing, discussing, or

solving a problem related to what they have been learning; and where they apply higher-order mental processes such as analysis, synthesis, and evaluation to what they learn (Habib, 2016).

By the end of the 20th century, a new term called “Active Learning” had appeared. AL has aroused the interest of those interested in learning and teaching theories. Interest in AL has increased with the aggregated scientific, cognitive, and technical development and progress in the early years of the third millennium (Beyer, 2014)

Christensen (2010), pointed out that AL is characterized by focusing on students’ accountability and their learning initiatives, skill acquisition, interest in clear learning strategies, reflecting learning steps, meta-cognitive skills, and interest in activities, and projects targeting problem-solving.

Active Learning strategies are associated with several variables, such as motivation. Motivation has received the attention of researchers in psychology due to its significance in building personality integration and defining types of human behavior. No activity of a living organism is devoid of a motive that it seeks to achieve or satisfy it. Motivation to learn is one of the variables that contribute to achieving good learning, as it plays a continuous role in most aspects of human learning and development regarding knowledge, perception, and retention. In this regard, the impact of motivation in learning is no less important than intelligence and mental abilities (Talafha,2016).

Motivation is the main driver for students’ activity, effectiveness, and hard and fruitful work. The more students are motivated, the more enthusiastic and productive they become; The less students are motivated, the lazier, more time-wasting, and less productive they become. Therefore, education aims to introduce appropriate school conditions to increase students’ motivation towards learning. (Jarwan,2012).

Motivation to learn is associated with many variables related to the university educational process, such as classroom environment, the educational strategy used, attitude towards the subject of learning, level of memory and information processing, achievement and response selection in the learning situation, and all the cognitive mental activities. Motivation is one of the learning methods of forming attitudes and values, thinking and solving problems. Motivation also helps explain many individual differences not due to reasons unrelated to the mental aspects of knowledge (Al-Sorour,2012).

Active learning strategies are also linked with general thinking and critical thinking. Thinking is the only way for the progress of man and nations. Critical thinking is one of the most important types of thinking that must be considered by all members of society, especially university students, since the personality, thinking, and entity of the individual are formed through critical thinking, which helps in producing a righteous generation capable of facing future challenges (Al-Hamran,2021).

Qatami & Al-Yousuf (2010) confirmed that teaching and developing critical thinking among learners is important and essential at all learning stages, and through the various curricula, its development among university students has become very important, as they are the cornerstone for achieving the desired goals.

Nurturing and developing students’ creative thinking skills requires a qualified, trained, knowledgeable, effective, and efficient teacher. In general, many researches have shown the great effectiveness of teachers in developing students’ skills (Kim, 2018).

As for the importance of critical thinking skills in the educational process, professionals believe that the intentional and systematic integration of these skills into the educational curricula enables educators to achieve many of the goals they could not achieve many years ago. They justify this by stating that these skills enable students to learn and achieve in academic subjects at a higher level.

Due to the importance of AL strategies, many previous studies that dealt with the effectiveness of AL in a number of variables were conducted, including:

Al-Hamran (2021) carried out a study that identified the effectiveness of AL in developing motivation, academic achievement, and students’ attitudes toward the classroom management course and the workshop. The results showed that there are significant differences between the mean scores of the students of the two experimental groups who were taught using AL and the mean scores of the students of the control group who were taught in the traditional method on each of the Scientific Achievement Test and the Motivation and Attitudes Scale, in favor of the experimental group.

Al-Ashsha, et al. (2019) conducted a study to investigate the impact of AL strategies on the development of self-motivation and academic achievement among students of the Faculty of Educational

Sciences affiliated to UNRWA. A Self-Motivation Scale and an Achievement Test were used in the Educational Counseling course to achieve the study aims. The results of the study revealed significant differences between the results of students in the two study groups in terms of self-motivation and academic achievement in favor of the experimental group.

Al-Sweijy (2018) carried out a study that identified the effectiveness of using ALS in developing professional competence and the achievement level of student teachers in the Mathematics Department of the College of Basic Education/ Kuwait. The study used the Professional Competence Observation Sheet and an Achievement Test. The results showed significant differences between the results of the students in the two study groups in terms of professional competence and achievement level, in favor of the experimental group.

McCarthy & Anderson (2017) conducted a study to investigate the impact of AL in increasing academic achievement and attitudes of university students compared to the traditional teaching styles. The study results showed that students who learned using the AL style did better than their traditionally instructed peers who learned using traditional teaching methods in terms of the achievement tests and their attitudes towards AL.

Wilke, (2017) carried a study to investigate the impact of using AL strategies in academic achievement, motivation, and self-efficacy on college students of Angelo State University in Texas in a human physiology course. The achievement test results revealed that the results of the students of the experimental group were far better than the students in the control groups. Their motivation towards learning was better during the course instruction and they were more active than their peers in the control group. The study results showed that there are significant differences in the motivation of both the experimental and control group. The results indicated that students in both the experimental and control groups demonstrated a positive attitude toward AL, and they stated that it helped them learn their courses better than traditional lecturing.

## **LITERATURE REVIEW**

The development of teaching strategies is vital at the educational level, as they represent the main link between teachers and learners. Through teaching strategies, teachers manage the teaching process in the classroom; they can stimulate the ideas and skills of their students. Because the learner has become the main focus of the learning process, it has become imperative for teachers to select and choose strategies that achieve this goal and that help stimulate him and enable him to practice various mental processes. In this regard, AL strategies are highly supportive of achieving this goal.

Kwafha (2012) emphasized that learning will be considered active when the learners participate actively during their learning since their active participation is crucial to the learning process.

Bedeir (2012) defines Active Learning as “A teaching style that relies on the learners’ self-activity and positive participation, through which they conduct research using a range of different scientific activities and processes such as observation and deduction to reach the required information by themselves, but under the teacher’s supervision, guidance and evaluation.”

Sa’adah (2006,33) defines Active Learning as “A learning and teaching method in which students actively participate in activities, exercises and projects through a rich and diverse learning environment that allows them to engage in constructive dialogue, discussion and conscious thinking”.

Various AL strategies lead to achieving the desired goals. Those interested in this field mentioned many of these strategies, the most important of which are those mentioned by Al-Azaidi (2015): Cooperative learning, concept mapping, problem-solving, brainstorming, inquiry, role-playing, projects, discussion and dialogue.

### **Teacher’s Roles in Active Learning**

Active learning has taken care of teachers and assigned them prominent roles to play in order to obtain positive results and outputs. Al-Suwaiji (2018) pointed to some of those important roles for teachers in AL, such as: Encouraging students and help them to learn, create a balance between individual and group educational activities, focus on issues related to the ethics of learning and teaching, maintain motivation

continuity in the learning process, train students on AL along with offering exercises to them, and create and enrich the educational environment surrounding students.

### **Learner's Role in Active Learning**

The role of the teacher alone is inadequate to carry out the learning tasks. Rather, students play a positive role in AL. Abu Hadros and Al-Farra (2012) mentioned some of the roles students could play in AL, including active participation in educational experiences, appreciating the value of exchanging ideas and opinions with others, exerting the required effort and allocating the necessary time for regular meetings with the academic advisor, clarifying the counseling needs, hopes and aspirations of both teachers and the psychological counselor, understanding that a student's growth and development as an individual begin with student's self-first, and so students accept advice and suggestions from teachers, interested persons, and specialists based on affection and friendship, and the student's confidence in their ability to deal successfully with the educational environment surrounding them.

Students' active involvement in the learning process is also important. They must be responsible not only for what they learn but also for how they want to learn it. If students are engaged in the learning process, the chance for learning retention is greater (AlSaleh,2020).

Motivation is an important psychological factor in classroom learning and teaching. It is an essential and important condition for the learning process. Knowing and understanding the impact of motivation helps reduce student distraction and increase their involvement in learning activities. Teachers must be more effective in creating exciting activities for students, increasing their interaction in educational situations (Nashwati, 2010).

Abu Jado (2011); Qatami & Adass (2006) stressed the interest of researchers in the field of educational and psychological sciences in the subject of motivation due to its importance in stimulating, directing, and continuing it to achieve goals, as well as its role in the process of learning and teaching. Learning motivation in classroom situations has received attention from educators. Nashawati (2010); Qatami & Al-Yousef (2010) agree that learning motivation is one of the goals that any educational system aspires to achieve, and that it can be used to achieve educational goals by considering it one of the factors affecting achievement.

Nashawati (2010) considers learning motivation as combining a general characteristic and a specific situational state for students. Meanwhile, Abu Jado (2011), assumed that motivation towards learning is represented in the students' tendency to create worthwhile and meaningful educational activities and to try to satisfy their academic needs. Motivation is where the interests of all those working in the educational process meet, including students, teachers, educational advisors, and everyone involved in the educational process.

Motivation has received increasing attention from educators alike. Exciting students' motivation towards learning is one of the dilemmas that teachers encounter in the classroom. Psychologists focused on motivation as a source of human energy and that it is the basis upon which forming individuals' habits, tendencies, and practices rely. Moreover, motivation modifies behavior and directs it towards achieving the desired goals.

Critical thinking is one of the significant and vital topics that education has been preoccupied with, then and in modern times, because of its great significance in enabling learners to acquire basic skills in the learning and teaching process. Aspects of such significance are evident in the tendency of educators of different scientific positions to adopt strategies for teaching and learning critical thinking skills. The primary goal of teaching and learning critical thinking is to improve students' thinking skills, which enables them to succeed in various aspects of their lives. Encouraging the spirit of questioning, research and reasoning, and not accepting facts without investigation or exploration all of this broadens students' knowledge horizons and push them towards embarking on broader scientific fields. This, in turn, enriches their cognitive structure and increases their qualitative learning. The importance of critical thinking increases if we are convinced of the point of view that learning is thinking. The importance of teaching and learning critical thinking is aggravated in this research if it addresses an important segment of student teachers in the Faculty of Educational Sciences who, it is hoped, will teach our children in the future how to think (Kim,2017).

Fasion & Fasion, (1998) defined five critical thinking skills as follows:

1. **Analysis Skill:** Analysis means identifying the relationships that have intended and actual semantics between the phrases, questions, concepts, adjectives, and other formulas for expressing a belief, judgment, experience, information, or opinion. The analysis skill includes sub-skills, as experts consider that examining opinions and discovering and analyzing arguments are among the sub-skills of analysis. This skill included (6) paragraphs.
2. **Induction Skill:** Induction means that the result validity is linked to the premise's validity. Examples of this skill: scientific proofs and experiments. Inductive statistics are considered induction even if this induction is based on prediction or probability. Induction also includes inferences and judgments issued by a person after referring to a situation or events. This skill includes (6) paragraphs.
3. **Inference Skill:** Inference refers to practicing a set of operations that depend on generating arguments and assumptions, searching for evidence, reaching conclusions, and recognizing causal connections and relationships. This skill includes (12) paragraphs.
4. **Deduction Skill:** Deduction refers to identifying and providing the elements necessary to draw logical conclusions from intended or actual deductive relationships between statements, adjectives, questions, or any other form of expression. Deduction also means the ability to create or form an argument or discussion through logical steps. The sub-skills of deduction are: Examining evidence, estimating alternatives, and reaching to conclusions. This skill includes (4) paragraphs.
5. **Evaluation Skills:** Measuring the credibility of the statements or any other expressions describes the person's understanding and awareness, as it describes the person's experience, situation, judgment, belief, and opinion. Thus, it measures the logical strength of the intended or actual inferential relationships among the statements, adjectives, questions, or any other form of expression. The evaluation skill includes two sub-skills: evaluating claims and evaluating arguments. This skill includes (4) paragraphs.

### Study Problem

Teachers need to diversify the employment of educational strategies in classroom situations to enhance students' motivation to learn and thus improve their critical thinking skills. The use of AL strategy in educational situations is urgent, as it enables teachers to make students aware of the living model they must adopt to guide their thinking processes and clarify them during their education. This strategy also provides students with planning, problem-solving, solution evaluation, and operation review skills. This enables them to become aware of and manage their thinking processes (Lee, 2014).

Students are the key outcome that all the educational institutions are trying to improve its quality, by achieving the desired objectives through the effective participation of learners in many programs and projects that guarantee the actual integration of learners into various activities of active learning (AlZahrani & Abu Rahmah, 2020).

The need for AL has arisen as a result of a group of factors, the most prominent of which being: the state of confusion and perplexity that learners complain about after each educational situation, which can be interpreted as a result of the lack of real integration of new information into their minds after each traditional educational activity. Hence came the interest of many researchers in this field, manifested by the many studies that pointed out the necessity of providing an AL environment in which students play a positive role during learning. Some of these studies indicated that using AL strategies helps develop students' skills.

Hence the importance of teachers realizing the importance of presenting types of smart and desirable behavior in front of the students, since learning by example is the most successful and effective learning method, especially when it is accompanied by clarifications or comments provided by the model. Trowbridge et al., (2016) confirmed that focusing on activating AL strategies would develop thinking skills in general and critical thinking skills in particular and that activating them contributes to developing students' ability to solve problems, which contributes to increasing their achievement at all levels of study.

Through the researcher's work as a faculty member at ZUJ for many years, she has observed that there are shortcomings in terms of the methods and strategies used in teaching the Curricula and Teaching Methods course, which makes the material mere information given to students that neither provides them with an understanding of structure and content of that material, nor does it encourage them to activate their inner sense and motivation towards thinking about what they have learned, or employing it consciously, especially as Curricula and Teaching Methods Course is a subject with rich repertoire of educational attitudes, problems and issues to which they should find multiple and varied solutions. Thus, the problem of the study is confined to identifying the impact of using some AL strategies in the Curricula and Teaching Methods on the learning motivation level and the development of critical thinking skills among the Faculty of Arts at ZUJ.

### **Study Questions**

1. Are there significant differences at ( $\alpha=0.05$ ) in the mean scores on the Learning Motivation Scale among students of the Curricula and Teaching Methods course at the Faculty of Arts at ZUJ that can be attributed to the teaching method (traditional method, active learning)?
2. Are there significant differences at ( $\alpha=0.05$ ) in the mean scores on the Critical Thinking Test among students of the Curricula and Teaching Methods course at the Faculty of Arts at ZUJ that can be attributed to the teaching method (traditional method, AL)?

### **Study Approach**

This study adopted the experimental method with the quasi-experimental design to identify the impact of using some AL strategies in the Curricula and Teaching Methods Course on the learning motivation level and the development of critical thinking skills among the Faculty of Arts at ZUJ students.

### **Study Subjects**

Two sections of the Curricula and Teaching Methods Course at the Faculty of Arts at ZUJ were randomly selected to achieve the study's objectives. During the first semester 2022/2023, (61) male and female students were randomly distributed into two groups: the experimental group (29) who were taught through AL strategies, and the control group (32), who were taught traditionally.

### **Study Tool**

Two tools were used to carry out this study:

1. Learning Motivation Scale

The research prepared the Learning Motivation Scale according to the following steps:

- The Learning Motivation Scale was constructed after referring to relative literature and previous studies.
- In its initial form, the Learning Motivation Scale consisted of (40) paragraphs.
- When formulating the paragraphs of the Learning Motivation Scale, the researcher took into account language clarity and simplicity to suit students' level. The researcher also took into account the clarity of the answers; with no answers having the same meaning.
- To facilitate result interpretation, the Learning Motivation Scale paragraphs were constructed based on the 5-point Likert Scale, with the levels of: strongly agree (5), agree (4), agree to a moderate degree (3), disagree (2), strongly disagree (1).
- Afterwards, the subjects' responses were divided into high, medium and low levels. The study subjects' responses in the three categories were divided into three levels: high, medium, and low; This is done through dividing the figure range from 1-5, into three categories to obtain the range of each level i.e.  $1.33 = 1-5$ . Accordingly, the levels are as follows: degree -1 to Accordingly, the response levels are as follows: Low degree of response: from (1 - 2.33), a medium degree of response (2.33-3.67) and a high degree of response (3.68-5).

## 2. Critical Thinking Test

The California Critical Thinking Skills Test (CCTST), 2000 was adopted. The CCTST was constructed based on the definition adopted at the expert consensus at the American Psychological Association Conference (APA). This test measures five critical thinking skills: analysis, induction, inference, deduction, and evaluation. Thus, the CCTST comprises five sub-skills: analysis, induction, inference, deduction, and evaluation.

### Tool Validity

The tool was validated by presenting it in its initial form to several reviewers. Specialists from the faculty members. In light of the reviewers' remarks, amendments were made to some paragraphs due to lack of clarity. In their final form, the Learning Motivation Scale consisted of (35) paragraphs, while the Critical Thinking Skills Test consisted of (34) questions.

### Tool Reliability

To calculate the reliability coefficient of the Motivational Learning Scale and the Critical Thinking Test, the data resulting from the split- half of their paragraphs and questions were processed using the Spearman-Brown formula to predict reliability. The reliability coefficient for the Learning Motivation Scale was (0.81), while it was (0.84) for the Critical Thinking Test, which is sufficient to signify the reliability of the paragraphs.

## RESULTS

First. Results Related to Question One: Are there significant differences at ( $\alpha=0.05$ ) in the mean scores of the Learning Motivation Scale among students of the Curricula and Teaching Methods course at the Faculty of Arts at ZUJ that can be attributed to the teaching method (traditional method, Active Learning)?

To answer this question, the means and standard deviations were calculated for the performance of the two study groups on the pre and post-Learning Motivation Scale. The following table shows that:

**TABLE 1**  
**MEANS AND STANDARD DEVIATIONS OF THE PERFORMANCE OF THE TWO STUDY GROUPS ON THE PRE AND POST LEARNING MOTIVATION SCALE**

No.	Variables	Figure	Pre-administration		Post-administration	
			M	SD	M	SD
1.	Experimental	29	11.28	2.604	16.14	1.382
2.	Control	32	10.26	1.673	10.71	1.736

Table 1 shows that there is a significant difference between the means and standard deviation of the scores of the students of the Curricula and Teaching Methods course at the Faculty of Arts at ZUJ on the pre and post Learning Motivation Scale between the experimental and the control group. The means and standard deviation of the experimental group subjects on the pre-learning Motivation Scale were (11.28) and (2.604) respectively. Meanwhile, the means and standard deviation of the experimental group subjects on the post-Learning Motivation Scale were (16.14) and (1.382) respectively. On the other hand, the means and standard deviation of the control group subjects taught using the traditional method on the pre-Learning Motivation Scale were (10.26) and (1.673) respectively. Meanwhile, the means and standard deviation of the control group subjects on the post-learning Motivation Scale were (10.71) and (1.736) respectively. To determine whether the differences between the means of the two study groups were significant at ( $\alpha= 0.05$ ), an Analysis of Co-variance (ANCOVA) was applied. The results of the analysis were as shown in Table 2:

**TABLE 2**  
**ANALYSIS OF CO-VARIANCE FOR THE PERFORMANCE OF THE TWO STUDY GROUPS**  
**ON THE POST LEARNING MOTIVATION SCALE**

#	Variance Source	Sum Squares	Freedom Degrees	Means of Total Scores	(F) Value	Significance Level	Impact Effect
1.	Pre-Application	8.494	1	8.494	3.577	.064	.059
2.	Method	440.980	1	440.980	185.722	.000*	.765
3.	Error	135.341	57	2.374			
4.	Total	585.333	59				

\*Significant at  $\alpha= 0.05$

Table 2 shows that there are significant differences between the experimental group (who were taught using the AL strategies) and the control group (who were taught using the traditional method), where F Value was (185.722) which significant at ( $\alpha= 0.05$ ) in favor of the experimental group students.

Second. Results Related to Question Two: Are there significant differences at ( $\alpha=0.05$ ) in the mean scores on the Critical Thinking Test among students of the Curricula and Teaching Methods course at the Faculty of Arts at ZUJ that can be attributed to the teaching method (traditional method, Active Learning)?

To answer this question, the means and standard deviations were calculated for the performance of the two study groups on the Critical Thinking Post-Test. Table 3 shows that:

**TABLE 3**  
**MEANS AND STANDARD DEVIATIONS OF THE PERFORMANCE OF THE TWO STUDY**  
**GROUPS ON THE CRITICAL THINKING PRE- TEST AND POST TEST**

No.	Variables	Figure	Pre-administration		Post-administration	
			M	SD	M	SD
1.	Experimental	29	10.79	2.366	16.07	1.387
2.	Control	32	11.19	1.579	10.71	1.736

Table 3 shows that there is a significant difference between the means and standard deviation of the scores of the students of the Curricula and Teaching Methods course at the Faculty of Arts at ZUJ on the pre and post-Critical Thinking Test between the experimental and the control group. The means and standard deviation of the experimental group students on the pre-critical Thinking Test were (10.79) and (2.366) respectively. Meanwhile, the means and standard deviation of the experimental group subjects on the post Critical Thinking Test were (16.07) and (1.387) respectively. On the other hand, the means and standard deviation of the control group subjects taught using the traditional method on the pre-Critical Thinking Test were (11.19) and (1.579) respectively. Meanwhile, the means and standard deviation of the control group subjects on the Post-Critical Thinking Test were (10.71) and (1.736) respectively. To determine whether the differences between the means of the two study groups were significant at ( $\alpha= 0.05$ ), an Analysis of Co-variance (ANCOVA) was applied. The results of the analysis were as shown in Table 4:



**TABLE 4**  
**CO-VARIANCE ANALYSIS FOR THE PERFORMANCE OF THE TWO STUDY GROUPS ON**  
**THE POST CRITICAL THINKING TEST**

#	Variance Source	Sum Squares	Freedom Degrees	Means of Total Scores	(F) Value	Significance Level	Impact Effect
1.	Pre-Application	9.444	1	9.444	6.129	.016	.097
2.	Method	428.535	1	428.535	278.089	.000*	.830
1.	Error	87.837	7	1.541			
2.	Total	517.333	9				

\*Significant at  $\alpha= 0.05$

Table 4 shows that there are significant differences between the experimental group (who were taught using the AL strategies) and the control group (who were taught using the traditional method), where F Value was (278.089) which is significant at ( $\alpha= 0.05$ ) in favor of the experimental group students.

## DISCUSSION

The results revealed significant differences between the experimental group (who were taught using the AL strategies) and the control group (who were taught using the traditional method), on the Active Learning Scale in favor of the experimental group students.

This result can be attributed to the fact that the AL strategies have strengthened the students' self-confidence and their abilities on the one hand and strengthened the confidence between the students and the instructor on the other hand. Moreover, the students began to have the opportunity to choose and work independently, reflect on their practice and thinking, and express their experiences. In this way, they began to be interested in carrying out the duties and assignments entrusted to them, so they spent extra time and effort on achieving them. They seemed actively engaged in their work and enjoying it, proud of their achievement. All of this was reflected in their sense of motivation and enhanced it.

The researcher attributes these results to the university's general classroom atmosphere, which is furnished with learning activities that help students participate, integrate, and be free to express ideas without fear. Moreover, group experimentation, discussion, and exchange of views are good means for achieving social interaction, building bridges of trust, and forming positive social relationships, with the benefit of achieving academic and intellectual growth and providing the best way to reduce student centrality. The students were allowed to exchange their opinions with their colleagues and peers, hear opinions different from their own, and understand that their point of view is not always the right one. All of this was reflected on the performance of the members of the experimental group and led to the development of their motivation.

The results of this study agree with the results concluded by Al-Hamran (2021) which showed that there are significant differences between the mean scores of the two experimental groups who were taught using AL and the scores of the control group who were taught using the traditional method on the Motivation Scale, in favor of the experimental group. The results of this study also agree with the results concluded by Al-Ashsha, et al., (2019) which revealed that there are significant differences between the results of students in the two study groups in terms of self-motivation, in favor of the experimental group. The results of this study also agree with the results concluded by Wilke (2017) which showed significant differences in the motivation of both the experimental and control groups in favor of the experimental group.

The results revealed significant differences between the experimental group (who were taught using the AL strategies) and the control group (who were taught using the traditional method), on the Critical Thinking Test in favor of the experimental group students.

This result can be attributed to the fact that the students of the experimental group who were taught using AL strategies were active participants in the educational process, as they had the opportunity, under these strategies, to develop positive attitudes towards learning that encouraged them to explore their attitudes and values, develop their internal motivation to motivate them to learn, facilitate their learning through practical experiences related to real-life problems, increase their attention and their interaction in the classroom, and develop their higher-order thinking skills. Ultimately, this leads to increasing and developing students' critical thinking skills. In particular, the individuals on whom the study was conducted are university students who are held responsible for their learning as they realize their goals and actively participate in the lecture.

This can be interpreted by the fact that AL strategies used in the Curricula and Teaching Methods course include information that covers the cognitive aspect of those performances in a large proportion. These strategies were explained and emphasized during the lectures and the electronic assignments in individual and group education. Students were provided with continuous reinforcement and appropriate feedback. The researcher also urged the students to review the theoretical part of the course, which contributed to developing their critical thinking skills.

## CONCLUSION

The results of this study confirm the importance of using AL strategies in university instruction to enable students to acquire critical thinking skills and to improve their learning motivation level. The results emphasized that the experimental group students taught in the Curricula and Teaching Methods course of the Faculty of Arts at ZUJ using the AL strategies excelled on the Learning Motivation Scale and the Critical Thinking Skills Test.

Based on these results, the researcher recommends the following: Use the AL strategies in instructing the Faculty of Arts at ZUJ students in light of learning outcomes related to learning motivation and critical thinking skills.

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