

**ORIGINAL ARTICLE**

# The Effectiveness of Teaching Interactive Learning Strategies on Self-Directed Learning, Self-Regulation and Assignment Value in Students

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## ABSTRACT

The present study proposed to investigate the effectiveness of teaching of interactive learning strategies on self-directed learning, self-regulation, and homework evaluation among sixth-grade male elementary school students in Bandar Khamir city. The research was a quasi-experimental study with a pretest-posttest design with a control group. From the statistical population, a sample of 40 people was selected using a two-stage cluster random sampling method and randomly assigned to two experimental groups of 20 people and a control group of 20 people. The measurement tools were the three self-directed learning questionnaires of Fisher et al. (2001), the self-regulation questionnaire of Bouffard et al. (1995), the homework evaluation questionnaire of Pintrich et al (1991), and the jigsaw educational protocol (2020), which were taught to the experimental group in 10 training sessions with a frequency of 1 session per week and each session lasting 90 minutes. After formulating the research hypotheses, the results of the data analysis, which was conducted using SPSS software, showed that the use of interactive learning strategies training for students significantly improves the level of self-directed learning, self-regulation, and homework evaluation in them, and this effectiveness has been confirmed both in general and in detail. According to the research findings, it is suggested that the use of interactive learning strategies training in educational and training workshops should be given more attention by teachers, educational coaches, and parents.

## KEY WORDS

Interactive Learning, Self-Directed Learning, Self-Regulation, Assignment Value, Jigsaw Method.



## Introduction

In recent years, educational developments and the advancement of new technologies have highlighted the need for active and independent learning for students. Despite the importance of this issue, evidence shows that many elementary school students, especially in sixth grade, do not have the ability to effectively manage self-directed learning, self-regulate, and evaluate assignments. These limitations can lead to reduced motivation, poor planning and implementation of assignments, and reduced quality of learning (Finn et al., 2025; Han et al., 2025). Self-directed learning is known as an active and independent educational process in which the learner takes responsibility for identifying learning needs, setting goals, choosing strategies, and evaluating learning outcomes, so that he or she moves out of the passive role and actively participates in managing his or her own learning process (Finn et al., 2025). There are various ways to develop people's abilities, including the ability to learn independently, one of which is self-regulation. Self-regulation is one of the important constructs in the field of education. The second important aspect of the self or self according to Bandura, is the concept of self-regulation. The concept of self-regulation is derived from the social cognitive theory of the famous psychologist Bandura, which refers to the beliefs or judgments of an individual about his or her abilities to perform tasks and responsibilities (Lee, 2013).

## Method

The present study aimed to investigate the effectiveness of teaching interactive learning strategies on self-directed learning, self-regulation, and homework evaluation of sixth-grade male elementary school students in Bandar Khamir County. In terms of the nature of the data collected, it is a quantitative study; in terms of its purpose, it is an applied study, and in terms of its method, it is a semi-experimental study with a pretest-posttest design with a control group. The statistical population of this study included sixth-grade male elementary school students in Bandar Khamir city. The students in the selected class were randomly divided into two equal groups of 20 students: the experimental group and the control group. This random division allowed the students' personal and academic characteristics to be balanced between the two groups, and any possible differences in results could be attributed to the effect of teaching interactive learning strategies. The instruments included the Self-Directed Learning Questionnaire (SRLQ) (2020), General Self-Regulation Questionnaire (SDLRS) (2019), Assignment Value Questionnaire (AVQ) (2020), and the Jigsaw Interactive Learning Protocol (2020). The intervention consisted of 10 weekly sessions of 90 minutes.

## Results

Frequency distribution, mean, central tendency indices, dispersion, and score distribution were used, and multivariate analysis of covariance was used in the inferential statistics section. The concentration and dispersion indices of mean, standard deviation, minimum, and maximum were related to the scores of self-regulation, self-directed learning, and evaluation of students' assignments in the control and experimental groups. This information is related to 20 members of the control group and 20 members of the experimental group. Based on the significance levels obtained for the Kolmogorov-Smirnov test, which was greater than 0.05 for all variables in both the control and experimental groups, the assumption of normal distribution of the values of all three variables of homework evaluation, self-directed learning, and self-regulation in the experimental and control groups has been confirmed. Therefore, it is not prohibited to conduct

a parametric analysis of covariance test to test the research hypotheses. To test the main hypothesis of the research in order to determine the effectiveness of using interactive learning strategies on self-directed learning, self-regulation, and evaluation of students' assignments, multivariate analysis of covariance was used. In this test, the assumption of no difference between the values of all three variables among the groups and then in the test rounds was examined in a multivariate manner. Before conducting this test, the assumption of equal variance of scores in the pre-test and post-test rounds was tested through Levene's test.

## **Discussion and conclusion**

The purpose of this study was to examine the effectiveness of interactive learning strategies on self-directed learning, self-regulation, and assignment value among sixth-grade male students in Bandar Khamir. The results showed that teaching interactive learning strategies was effective on students' self-directed learning, self-regulation, and task evaluation. The theoretical and empirical findings reviewed in this study indicate that self-directed learning, as one of the essential components in modern educational systems, plays a decisive role in improving the quality of student learning. However, evidence indicates that many elementary school students, especially in the sixth grade, face weaknesses in skills related to self-direction, including self-regulation and task evaluation. This can lead to consequences such as reduced motivation, inability to plan effectively, and decreased academic performance (Finn et al., 2025; Han et al., 2025). In explaining this situation, the role of self-regulation is highlighted as one of the basic prerequisites for self-directed learning. According to Bandura's (1986) social cognitive theory, an individual's beliefs about their own abilities play an important role in their effort, persistence, and performance. Students with higher self-regulation not only perform better in the face of learning challenges, but also view assignments with a more positive attitude and consider them an opportunity for growth. These findings are consistent with the results of research by Lee (2013) and Klassen and Tze (2014), which show that high self-regulation is associated with increased motivation to achieve, improved cognitive skills, and better academic performance. On the other hand, the valuation of homework, as one of the important motivational components, has a significant impact on the level of involvement and effort of students in the learning process. Based on the available evidence, students who value their homework more are not only more interested and motivated to learn, but also have better academic performance (Andrews & Aikens, 2019; Pietsma & Van der Veen, 2009). Also, the positive relationship between perceived competence and the valuation of homework (Eckles & Wigfield, 2002) shows that strengthening self-efficacy beliefs can indirectly increase the perceived value of homework and, as a result, improve the quality of learning. In summary, it can be concluded that enhancing self-directed learning in students requires simultaneous attention to three basic components: self-regulation, task evaluation, and the use of interactive learning strategies. Accordingly, it is suggested that teachers provide the basis for the development of these skills in students by designing participatory activities, using active teaching methods, providing constructive feedback, and teaching self-regulation strategies. Also, reviewing curricula and emphasizing learner-centered approaches can play an important role in improving the quality of learning and developing independent and capable learners.

According to the research findings, it is recommended that in order to increase the level of student learning, teachers should pay more attention to the use of interactive learning strategies. Also, in order to improve the level of student self-regulation, homework should be presented in the form of multimedia content, and homework should be completed in the same format.

Students' self-regulation in solving problems using interactive teaching methods can greatly contribute to instilling a sense of empowerment in students and their self-regulation. Finally, it is recommended that in order to improve the level of evaluation of homework by students, managers and teachers should pay attention to presenting various homework in the form of expert interaction-oriented educational content.

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### **Authors' Contribution**

The authors were responsible for the study's conceptualization, methodology, data collection, analysis, writing, and final approval of the manuscript.

### **Conflict of Interest**

The author declares no conflict of interest regarding the publication of this article.

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