ISSN 1798-4769 (print); ISSN 2053-0684 (online)
Journal of Language Teaching and Research, Vol. 17, No. 2, pp. 477-487, March 2026
DOI: https://doi.org/10.17507/jltr.1702.10

Practicing Constructivist Teaching by English Language Teachers in Jordan

Nibal Malkawi
Al-Balqa Applied University, Amman, Jordan

Abstract—**Constructivist teaching methods help students become better by placing more emphasis on the acquisition of tangible knowledge than just gathering facts about a subject. This method works well for teaching English and promises that learners get the material better. This study aims to assess the effectiveness of constructivist teaching strategies used by English teachers in Jordan. The descriptive approach was used in the basic quantitative phase to analyse the data. With the aid of IBM SPSS software, statistical analysis was carried out using metrics like mean and SD, which show a moderate to high degree of variance. A T-test and Pearson's coefficient correlation were also included in the evaluation, and they showed that constructivist education is used in elementary schools in Jordan at a moderate to high level.**

Index Terms—**knowledge, instructional approach, constructive teaching, student improvement**

I. Introduction

Examining teachers' abilities and experiences is essential for them to guarantee a successful teaching-learning process. Constructivism emphasises the sharing of ideas and develops social and communication skills in a supportive learning environment (Bany Yassien et al., 2023; Qureshi et al., 2021). In order to promote social mobility, a variety of job pathways, and active participation in skill development, teachers are essential. Teachers must continue their education in order to remain current.

Instructors can provide a productive teaching-learning environment that increases student engagement thanks to their general knowledge and skill set. The constructivist theory posits that students actively build knowledge, moving beyond passive information gathering from lectures (Alazzam et al., 2021; Alazzam et al., 2024; Alghazo et al., 2023; Mohammed & Kinyó, 2020). Factors such as teachers' academic education level, experience, and supervisor's level significantly impact the teaching process and students' learning experiences.

Constructivism assists teachers in improving students' communication skills by establishing impactful and positive classrooms that encourage idea exchange and collaboration. Prioritising knowledge collection at the elementary level is crucial, emphasising learners' perceptions and interests (Al-Jezawi et al., 2023; Danaa et al., 2022; Essa et al., 2023; Melhim et al., 2023). Classroom activities fuel students' interest, ensuring an attentive class. English learning is vital for global communication and development, necessitating the application of the constructivist approach to enhance the traditional learning process.

Constructivism empowers teachers to influence students' learning paths, focusing on learners' overall progress and successful knowledge establishment (Du Plessis, 2020; Malkawi et al., 2023; Obeidat et al., 2022; Rababah et al., 2023). Teachers who grasp the constructive theory acknowledge students' unique experiences, shaping classroom interactions daily. The skills, knowledge, and understanding of the constructive approach significantly impact teaching practices. The Jordanian government prioritises education development, undertaking initiatives to enhance teaching quality and focusing on early childhood education (Salah et al., 2021).

The Ministry of Education in Jordan emphasises early childhood education by expanding preschool enrollment rates (Aljedayah et al., 2022; Alkhaldi et al., 2023; Almsbhieen et al., 2023; Al-Saidat al., 2023; Ministry of Education, 2018). Concurrently, efforts are directed toward the growth and improvement of teachers to enhance the overall teaching process (Bani-Khair et al., 2024; Wolor et al., 2022). Therefore, studying the importance of constructivist teaching in English education becomes essential. This study aims to explore relevant aspects and evaluate the impact of practicing constructivist teaching by English teachers in Jordan.

A. Objectives of the Study

The study aims to:

- Analyse the importance of practicing constructivist teaching by English teachers in Jordan.
- Identify the degree to which teachers are practicing constructivist teaching in the English language in public schools from the teacher's perspective.
- Understand the remarkable differences in the level of degree among English language teachers.
- Evaluate variables such as gender, years of experience and education, and supervisor level that impact the teaching process.

B. Research Questions

The study intends to answer the following questions:

1. What is the extent to which teachers practice constructivist teaching in the English language in public schools in Jordan, considering the teacher's perspective?
2. What notable differences exist in the degrees among English language teachers?
3. What variables influence the constructive teaching process, such as gender, years of experience and education, and supervisor level?

C. Significance of the Study

The study highlights that the constructivist teaching process enables teachers to focus on students' capabilities. Constructivism, being a student-centric approach, influences students to actively engage in the learning process, ensuring robust and effective knowledge acquisition. Additionally, teachers' skills, experience, and overall knowledge significantly influence the teaching and learning process.

II. Literature Review

The Jordanian government's curriculum changes incorporate technology in the learning process, making English language study essential for staying competitive globally (Lauder & Mayhew, 2020). English proficiency is highly valued in the global labor market, influencing public policies. Al-Bataineh (2019) suggests that constructive teaching methods contribute to children's knowledge, enhancing their employment prospects.

Qiu (2019) pointed out that constructivism is a theory of knowledge and learning that places an emphasis on learner efforts, according to Qiu, learning is a process whereby learners develop important and meaningful understanding based on their prior information and experiences, which is eventually accomplished through interactions with society and culture. Contrariwise, the constructive learning theory, which depends on four main elements—context, meaningful construction, cooperation, and conversation—enables teacher-guided, student-centric learning.

Almuhaisen et al. (2020) reported that information and communication technologies (ICT) are one of the major parts of higher education, and this eventually facilitates better career growth for the individual. This also helps the learners to successfully gain the best probable ways to advance their understanding of the subject matter. As such, this would enhance the opportunity for collaboration and sharing ideology with others. They recognised that English language is considered the major key that helps students gain the capability to utilise ICT to a large extent. As mentioned by Sinaga and Oktaviani (2020), it is essential for students to learn the English language to communicate with others across the world, which also helps individuals establish an emotional and cultural bond with others. Therefore, it is evident that studying the English language is essential in order to explore the world and gain knowledge by exploring the world.

Rapanta (2021) claims that the constructivist approach concentrates on students' fundamental development and aids in their acquisition of concrete subject-matter information, allowing them to use this knowledge in novel circumstances. Constructive theory has a big impact on educational pedagogy, allowing teachers to attract pupils to the learning process.

Sakarneh and Al-Swelmyeen (2020) investigated how constructivism theory is applied by inclusive basic school teachers in Jordan. Data collection and analysis were done using a qualitative method; classroom observations were made using the New South Wales Quality Teaching Model's observation sheet. Purposive sampling was utilised to choose a limited number of individuals. Among the participants were four educators from four distinct, inclusive schools. The low degree of constructivist education implementation was one of the main conclusions. In contrast to mathematics, where it was at a low level, the total utilisation score for Arabic was at a reasonable level. There are suggestions and future directions for practices, policy, and research made.

Sakarneh and Al-Swelmyeen (2020) note attempts at re-establishing Jordan's educational system, with teachers utilising constructivism to transform the teaching process. Constructivism, viewed as a method for making the process attractive and impactful, facilitates effective learning and knowledge expansion (Hong & Han, 2023). The theory explains the acquisition of knowledge through experiences, attitudes, and beliefs, emphasising psychology in the teaching-learning process.

Previous Studies

Humam and Suleiman (2001) explored how the constructivist learning model's application in scientific education affected students' conceptual and critical thinking development. Sixty-one male and female students made up the study sample. They were split into two groups at random: the experimental group studied using a constructivist approach, while the control group did laboratory work using a conventional method. The study used the applied test (T) and the two-method analysis of variance test to find statistical differences. The findings revealed statistically significant differences in the students' means of achievement before and after using the constructivist model as a teaching tool, as well as statistically significant differences in the learners' A means performance on the critical thinking test before and after using the constructivist model as a teaching tool. These findings demonstrate the efficacy of the constructivist model in terms of student achievement and thinking development.

Kim (2005) explored how the constructivist learning model affected the Korean sixth-grade students' academic performance and self-perception. The study's sample included 76 students who were divided into two groups: the experimental group studied using the constructivist learning model, and the conventional group was taught through using the traditional method. The constructivist learning model was found to be helpful in improving academic achievement over the nine-week experiment; nevertheless, it did not have any impact on students' self-concept.

Bawi and Khaja (2006) sought to determine how students at teacher training institutions in Iraq felt about the subject matter and how misconceptions about certain physics ideas may be corrected through the use of Posner models and constructivist learning. The study sample consisted of 55 students, of whom 27 were in the first experimental group and 28 in the second. The two groups were statistically matched in terms of academic achievement, testing of prior physical information, IQ, age, and the use of the Posner Model in the second experimental group's instruction and the Constructivist Learning Model in the first group's. It was a semester-long experience. The researchers created two instruments: a scale measuring attitudes towards physics with 38 items and a posttest with 40 multiple-choice items related to physical concepts. They used the two instruments on the study population. The findings demonstrated a statistically significant difference in the two variables' pre- and posttest modifications of the misconceptions about physical concepts for both groups. Additionally, a statistically significant difference was discovered between the study's two groups' scores, favouring the first experimental group's attitude towards physics.

Matrafi (2008) examined how teaching science using the constructivist learning model affected the academic performance and attitudes of third-intermediate students in Saudi Arabia. The study sample comprised 132 students in the third-intermediate grade, split into two groups: the experimental group used the constructivist learning model, while the control group used the conventional method. The three stages of the Academic Achievement Test-Memorization, Understanding, Application, and Attitude Towards Science-represented the study tools. The study's validity and reliability were validated, and the findings demonstrated that students in the experimental group performed better than those in the control group in terms of post-academic accomplishment across all cognitive domains assessed, as well as in terms of their attitudes towards science as a whole.

Hussein's (2009) study sought to determine how teaching chemistry using the constructivist learning model affected students' academic performance and capacity for critical thought in the third secondary scientific grade. With the Constructivist Learning Model, the researcher created a teacher's handbook covering the subjects of power in chemical reactions. One hundred and twenty male and female secondary school students were divided into two groups, control and experimental, to make up the study sample. The researcher used the critical thinking and academic achievement tests to gather data for the study. The findings indicated that there were statistically significant differences between the two groups' scores on the post-academic achievement test, favouring the students in the experimental group; additionally, there were statistically significant differences between the scores of male and female students on the post-academic achievement test, favouring the female students; and finally, there were statistically significant differences between the scores of the two groups—the experimental and the control—on the post-critical thinking test, favouring the students in the experimental group.

Gemayel (2010) studied the impact of teaching biology using the constructivist learning model on the growth of scientific thinking in fourth preparatory grade (tenth year) students in Mosul, Iraq. The study sample comprised seventy-four students who were divided into two equal groups: the experimental group studied the Constructivist Learning Model, while the control group studied biology using the conventional method. The test of scientific thinking strategies was used by the researcher, and the results revealed that there was a statistically significant difference in the posttest of scientific thinking between the experimental and control groups, with the experimental group doing better.

Al-Butti and Al Khafaji (2010) examined how second intermediate school pupils' attitudes towards physics and academic performance were affected by the application of the constructivist learning model. The sample comprised 47 female students who were divided into two groups: 25 students in the experimental group studied using constructivist learning, while 22 students in the control group studied using the conventional approach. The age difference and prior scientific accomplishments between the two groups were quite similar. The achievement exam of 40 multiple-choice items, and the two researchers created instructional plans, behavioural objectives, and a scale of attitudes specifically designed for that purpose. The experimental group, which studied using the constructivist learning model, outperformed the control group, which studied using the traditional technique, in both achievement and attitudes towards Physics. The study period lasted one academic semester.

Ahmad (2011) looking into how well science instruction using constructivist learning affects students' academic performance and social skill development in Egypt's first preparatory grade. The study's findings demonstrated statistically significant differences in the study groups' social and cognitive skills, favouring the group that used constructivist learning to study science. The impact of applying the constructivist learning model on first-level secondary students' academic performance was investigated by Danial and Bimbola (2010). Twenty students from schools in southwest Nigeria made up the study sample. The study's findings demonstrated the beneficial effects of constructivist education on students' academic achievement.

Agustini's (2019) study sought to understand how teachers practiced and applied constructivism values in the classroom, as well as how they perceived the concept, application, and impact of these values in public primary schools in Badung Regency. She also sought to ascertain the relationship between teachers' perceptions of constructivism values

and its practices in the classroom. The mixed methods embedded design of this study meant that the quantitative data predominated over the qualitative data, allowing for both quantitative and descriptive descriptions of the data. Three English instructors from three separate public primary schools in Badung Regency who shared the same educational background in English instruction served as the study's subjects. Teachers' perspectives were gathered through the distribution of questionnaires, while observations and interviews were used to supplement the data on classroom methods and implementation. Following data collection, the results of the questionnaire were analysed numerically, and the findings of classroom observations and interviews were analysed qualitatively using an interactive analytic model. The study's findings showed that: (1) teachers had strong opinions about the idea, application, and effects of constructivism values; (2) instances of constructivism values being practiced in the classroom were classified as low frequency, meaning that teachers hardly ever did so; and (3) despite having strong opinions about constructivism values, the frequency of the practices was classified as low frequency. It is possible to draw the conclusion that educators frequently fail to align their beliefs about constructivism's principles with its methods in the classroom.

In order to determine the degree to which EFL teachers' beliefs and their perceptions of classroom practices aligned with the new curriculum, which was founded on a constructivist perspective of learning and teaching, Kaymakamoğlu (2014) looked into the teachers' beliefs regarding the nature of EFL teaching and learning in the Cyprus Turkish State Secondary Schools. The data was gathered using a questionnaire that included 17 items about teachers' views (first part) and 17 items concerning teachers' practices (second part). The three theoretical pillars of the items were "EFL Learning," "Learning Environment," and "EFL Teacher's and Learner's Role. To learn more about the teachers' attitudes and methods in the classroom, calculations of frequency distributions, percentages, means, and standard deviations were made. To examine potential variances in beliefs and practices between the male and female teachers, two-tailed t-tests were also used. The results of the questionnaire's statistical analysis revealed that the EFL teachers' practices and views aligned with the new curriculum. The findings of the t-test revealed how similar the stated views of the beliefs and practices of the male and female teachers were to one another.

Akanwa and Ovute (2014) looked at the effects of the constructivist learning model on the achievement and interest of secondary school students studying physics in Nigeria. The sample encompassed 160 students. The subjects of sound and waves were taught to two groups: the experimental group, which was taught using the steps of the constructivist learning model, while the control group was taught using the conventional method, the study's findings demonstrated, after the exam was administered, how well the Constructivist Learning Model affected interest and achievement.

Malkawi et al. (2023) studied how well the constructivist and cognitive learning models performed in comparison to the traditional method in terms of academic achievement, alternative conception modification, basic science process development, and attitudes towards science study among students in the second intermediate grade. The study sample comprised fifteen female students from schools in Jordan, who were divided into three groups. The first experimental group followed the stages of the constructivist learning model, the second experimental group followed the stages of the cognitive learning model, and the control group followed the conventional approach. The following tests were used to gauge the group's performance before and after the tests: an achievement test, a test of attitudes towards science study, a test of alternative scientific beliefs, and a test of basic science procedures. The study's findings revealed that the constructivist learning model has an impact on how achievement develops, how alternative conceptions are modified, how basic science processes are developed, and how learners feel about studying science.

III. Methods

A. Sample of the Study

A random sample procedure was used to choose 398 applicants from the population, of which 206 were female teachers and 192 were male teachers. It was selected from public and private basic schools in Wadi el-Sir Directorate of Education, Jordan. A pilot study was carried out with 20 teachers who were not part of the main study population to evaluate the validity of the questions.

B. Data Collection

The descriptive approach was employed to successfully gather information from male and female English teachers at the primary stage in both public and private schools in Jordan. A survey was administered using close-ended questionnaires, comprising a total of 40 questions (5 demographics and 35 topic-oriented) to obtain valuable knowledge related to the subject matter. The questionnaire for the study drew insights from instruments used by Rababah (2021) and Sakarneh and Al-Swelmyeen (2020) in their research on constructivist learning in Jordanian schools.

C. Data Analysis

The participants' responses were analyzed using the statistical data analysis process. IBM SPSS software was used to compute the mean and standard deviation for the collected data, along with a T-test for variables such as gender and supervisory experience. A correlation study was carried out to determine the work's strength, with the Sig. value (<0.005) being assessed. To assess the study's validity and reliability, Cronbach's alpha was also calculated.

This study's results depended on the development of the examined equations and the collection of data through reliable survey techniques. For this, descriptive statistics that displayed the mean, standard deviation, and degree of

variance were used. Additionally, the T-test for specific independent variable learning processes and the Pearson method-based correlation coefficient computation were essential elements of the study's measurement.

D. Reliability Test (Cronbach Alpha)

To assure accuracy and consistency, the study's validity and reliability were emphasized. Using the SPSS programme, reliability statistics were evaluated using Cronbach's alpha test, which produced a statistical value of 0.998, or 98%. This high number satisfies the requirements set forth by Amirrudin et al. (2021) for reliability testing in qualitative research, confirming the consistency and quality of the data collected. The measurement contributes to the evaluation of constructivist teaching by English language teachers in Jordan, validating the perfection of the collection of information regarding the teaching process in Jordan.

Reliability Statistics

Cronbach's Alpha	N of Items
.998	40

Figure 1. Reliability Statistics (Source: IBM SPSS)

The demographic characteristics of the sample are presented in Table 1.

TABLE 1
DEMOGRAPHIC CHARACTERISTICS

Items	Mean	St. devi.	Degree of variance
Q1. What is your gender?	1.52	.500	High
Q2. Years of experience	2.04	.610	High
Q.3 Supervisor level	1.86	.466	High
Q.4 Education level	2.14	.853	High

The mean value in the first demographic category is highlighted at 1.52, and the standard deviation is noted as 0.500. The interpretation of the mean and standard deviation in this demographic question points to the highest degree of deviation. The mean value and standard deviation exhibit a significant gap, confirming the highest degree of deviation in the descriptive statistics. Descriptive statistics primarily involve the evaluation of the mean, median, mode, and standard deviation, providing insights into the degree of deviation in the study.

Moving to the second demographic category based on years of experience, it is portrayed as having a high degree of deviation, with the standard deviation value reflected as 0.610 and the mean value highlighted at 2.04.

In the third demographic category of this measurement, a lower value is depicted compared to other values, indicating a moderate degree of deviation, with the value noted as 0.5. The educational level, as a demographic category in the questionnaire, stands out with an 8.53 standard deviation, while the mean value is stated as 2.84. This value is interpreted as the highest degree of deviation in this statistical evaluation. Consequently, the educational level exhibits the highest degree of deviation among all the demographic categorical values. The application of statistical measurement aids in providing a reliable evaluation of the statistical measurement.

IV. FINDINGS AND DISCUSSION

A. Responses Related to Constructivist Teaching

Table 2 presents the mean, standard deviation, and degree of deviation.

TABLE 2
MEAN, STANDARD DEVIATION, AND DEGREE OF DEVIATION

No.	Mean	Standard deviation	Degree of deviation	
1.	Constructivist teaching is highly engaging for students.	2.84	.715	Moderate to High
2.	Modern theories of learning establish the significance of constructivist teaching processes.	2.87	.734	Moderate to High
3.	Group work and student-student interaction are key components of constructivist teaching.	2.91	.750	Moderate to High
4.	English learning is essential for effective communication.	2.91	.780	Moderate to High
5.	Constructive learning impacts human cognitive development in English language teaching.	2.92	.772	Moderate to High
6.	Constructivist teaching is an innovative and student-centered approach.	2.85	.698	Moderate to High
7.	Critical thinking, collaboration, problem-solving, and meaningful learning are emphasized in constructivist teaching.	2.86	.733	Moderate to High
8.	Constructive learning utilizes interactions and conversations with others to facilitate learning.	2.85	.705	Moderate to High
9.	Attitudes, beliefs, and learners' previous knowledge constructions are taken into account during the information construction process.	2.85	.698	Moderate to High
10.	Exposing learners to alternative perspectives, collaborative and cooperative learning are preferred.	2.85	.690	Moderate to High
11.	Gaps and challenges in the current teaching practices of English language teachers are addressed through constructivism.	2.87	.711	Moderate to High
12.	Collaborative and cooperative learning are integral to this process.	2.86	.710	Moderate to High
13.	Learning practices assist learners in engaging in activities related to daily life.	2.84	.707	Moderate to High
14.	Appraisal is genuine and associated with the teaching process.	2.86	.712	Moderate to High
15.	Construction occurs through personalized approaches, experience, negotiation, social interactions, and collaboration.	2.85	.711	Moderate to High
16.	Strategies and tools are key viewpoints in the perspective of such learning processes.	2.86	.702	Moderate to High
17.	The learning process provides a new route into the subject based on students' prior knowledge.	2.85	.714	Moderate to High
18.	Constructivist teaching focuses on addressing a variety of life issues.	2.85	.737	Moderate to High
19.	It provides students with the ability to reflect on the questions they ask.	2.85	.714	Moderate to High
20.	Research outside the classroom is integrated with constructive learning.	2.87	.706	Moderate to High
21.	It empowers learners to self-assess their abilities.	2.85	.727	Moderate to High
22.	Constructive learning leads to the development of deep knowledge and understanding.	2.86	.715	Moderate to High
23.	A quality learning environment is created with high expectations and social support.	2.86	.702	Moderate to High
24.	Constructive learning helps in the development of higher-order thinking and problem-solving abilities.	2.86	.697	Moderate to High
25.	Higher engagement and the right direction are provided with constructive learning.	2.86	.704	Moderate to High
26.	This leads to activities that help develop the proper connection between the body and mind.	2.86	.697	Moderate to High
27.	Students' performance is assessed with real situations rather than memorization.	2.87	.706	Moderate to High
28.	It helps students make proper connections between different subject topics and apply knowledge from one to another.	2.86	.697	Moderate to High
29.	It integrates the local environment into the learning process while helping deal with real-life issues.	2.85	.695	Moderate to High
30.	Students have better control over the learning process.	2.86	.702	Moderate to High
31.	Students are encouraged to exchange opinions and accept constructive criticism.	2.86	.697	Moderate to High
32.	It improves students' ability to deal with various real-life issues.	2.85	.695	Moderate to High
33.	Teachers play the most important role in the entire process.	2.86	.702	Moderate to High
34.	Goals and objectives are achieved by students with the help of teachers.	2.85	.695	Moderate to High
35.	The overall learning process is student-centric.	2.86	.702	Moderate to High

In the topic-oriented description, the SPSS application has provided insights for better development, contributing to a more meaningful interpretation of mean, SD, and the degree of deviation. The first question in the topic-oriented section, "Constructivist teaching is very engaging for students," signifies a high degree of variance. The mean value for this category is 2.84, and the standard deviation is 0.715, both representing the highest degree of standard deviation. Similarly, the statement "Modern theories of learning establish the importance of constructivist teaching processes" has a standard deviation of 0.734, indicating a high degree of variance, as it is higher than 0.5. Moreover, the mean value for this category is 2.87, showing a significant deviation from the standard deviation.

The analysis highlights that both male and female teachers are actively practicing constructivist learning, with a higher percentage of female teachers involved in the teaching process. The statistical application clarifies gender differentiation in the workplace, with a degree of deviation depicted as moderate to high, aligning with the development

of modern teaching techniques in Jordan. Responses show a moderate to high inclination towards the application of constructivist learning at the educational level. This suggests that students may experience significant improvements in teaching facilities in the future.

The topic-related description category demonstrates a positive trend among mean values, with values close to three. For instance, "Strategies and tools are the main viewpoints in the perspective of such learning processes," is stated with a mean value of 2.86, which is near three, indicating a moderate to high interpretation of the main learning process. The adoption of this learning process across elementary schools in Jordan influences various aspects of the learning process for students, inspiring teachers and creating positive actions within the curriculum. This suggests that the learning process may further develop in the future, ensuring fruitful results.

In the topic-oriented section, "Group work and student-student interaction are the major components of constructivist teaching," it is highlighted with a mean value of 2.91, providing a better assurance of the effectiveness of the learning process. Additionally, "English learning is an important part of communication" is emphasized with a mean value closer to three, ensuring the success of the English learning process through constructivist methods. The application of constructivist learning is considered a top priority for teachers, significantly influencing all students. On the other hand, "Gaps and challenges in the current teaching practices of English language teachers are highlighted with constructivism," as indicated by a mean value of 2.87, revealing a major issue in the execution of learning processes. Therefore, efforts should be made to address these challenges and implement effective learning practices.

Most respondents strongly agree with the options, as evident from the mean values close to three. "Group work and student-student interaction are the major components of constructivist teaching," has a mean value of 2.92, indicating a high degree of deviation due to the respondents' views aligning with the perfectly executed major teaching process. This statistical implication and application highlight a better understanding of the significant growth of the constructivist teaching process in Jordan, with female teachers being more encouraging than male teachers.

From the above analysis, it is evident that the application of constructivist learning is not extensively integrated into the country's education system concerning the English language learning process. Deviations fall in the moderate to high range for all measurements, indicating a moderate level of application. There is a need for improvement to provide students with a more developed learning experience.

B. Independent T-Test Sample

(a). Gender of the Teachers

Group Statistics

	1.What is your gender?	N	Mean	Std. Deviation	Std. Error Mean
5.Constructivist teaching is very engaging for the students	1	192	2.53	.868	.063
	2	206	3.13	.338	.024

Figure 2. Group Statistics (Gender of the Teacher) (Source: IBM SPSS)

The male respondent in the statement "Constructivist teaching is very engaging for the students" has been identified as exhibiting less effective desired action. On the other hand, female respondents have shown a higher level of interest in the introduction of the constructivist learning process in an elementary school in Jordan. The T-test has been emphasised, showcasing statistical growth and including the mean, SD, and standard error of the mean. As outlined by Doğan and Ercan (2020), the T-test in independent groups compares the main mean value, which tends to be more similar between different sample sets. The section pertaining to the female rate has been analyzed by addressing respondents and their views on the utilization of the teaching process in schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
5.Constructivist teaching is very engaging for the students	Equal variances assumed	150.406	.000	-9.200	396	.000	-.600	.065	-.728	-.472
	Equal variances not assumed			-8.964	244.380	.000	-.600	.067	-.732	-.468

Figure 3. Independent Sample Test (Gender of the Teacher) (Source: IBM SPSS)

The constructive learning processes are much more engaging for the students and have been highlighted in the section with a better evaluation of the T-test. In this evaluation, the value has been derived from the action of Levene's Test for Equality of Variances. This measurement is highlighted with an F value of 150.406, which is the most significant in this section and creates better assurance of the statement. The t-test equity means have stated the equal variance assumption as -9.200, which is common to major development, and this can be better interpreted with a huge degree of variance. Moreover, the DF value is depicted as 39 within the equal assumption of that statement, which has verified the 2-tailed value in this test. In addition, a major action in the mean difference has been highlighted with -0.600, which is significantly associated with pieces of evidence of the population mean being significantly different.

(b). Supervisory Level

Group Statistics

	3.Supervisor level	N	Mean	Std. Deviation	Std. Error Mean
5.Constructivist teaching is very engaging for the students	1	75	1.80	1.027	.119
	2	304	3.03	.160	.009

Figure 4. Group Statistics (Supervisory Level) (Source: IBM SPSS)

In the supervisory level, grades 3–4 and grades 5–6 have been tested, which has depicted the significant value of the entire findings. In the statement "Constructivist teaching is very engaging for the students," 75 respondents have been highlighted in the section of major statistical evaluation, which has been depicted as the major importance of values such as mean and standard deviation along with standard error within the mean value. The number of respondents has been highlighted in the section of 304 respondents in grades 5–6. The application and determination of the supervisor level significantly highlighted that more female teachers are effective in taking action by adopting constructivist learning processes in the elementary schools in Jordan. In this concern, more respondents have been found at grades 5–6.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
5.Constructivist teaching is very engaging for the students	Equal variances assumed	995.594	.000	-19.939	377	.000	-1.226	.062	-1.347	-1.105
	Equal variances not assumed			-10.313	74.893	.000	-1.226	.119	-1.463	-.989

Figure 5. Independent Sample Test (Supervisory Level) (SOURCE: IBM SPSS)

The constructivist action and the major test value have been highlighted as Levene's Test for Equality of Variances, in which the value has been noted as 1305.422. The main value of the equal variance assumption has been highlighted with 291, which can establish a better understanding of variance among the major developments.

(c). Significance Level (Pearson Correlation)

Correlations

		3.Supervisor level	5. Constructivist teaching is very engaging for the students
3.Supervisor level	Pearson Correlation	1	.757**
	Sig. (2-tailed)		.000
	N	398	398
5.Constructivist teaching is very engaging for the students	Pearson Correlation	.757**	1
	Sig. (2-tailed)	.000	
	N	398	398

**. Correlation is significant at the 0.01 level (2-tailed).

Figure 6. Independent Sample Test (Supervisory Level) (Source: IBM SPSS)

The correlation and coefficient have been determined with the help of perfection in developing a comparison between dependent and independent variables. The positive correlation has been highlighted with a value near one, and vice versa can be considered a negative correlation in this section. Pearson's correlation in this study has stated that constructivist teaching is very engaging for the students.

V. Conclusions and Recommendations

Considering the responses of the candidates, it is evident that the majority of candidates strongly agree with the questions. This signifies that practicing constructivist teaching is capable of enhancing student engagement to a large extent, and the analysis has also highlighted that constructive teaching in elementary schools in Jordan is moderate and high. On the other hand, the study has also highlighted that the findings complement past studies greatly. It is also visible in this particular study that constructive learning practices are utilized in the English learning process, helping teachers make the learning process student-centric to ensure the gathering of effective knowledge on the subject matter.

Looking into the present scenario, it is clear that constructive teaching methods need to be applied at all levels of teaching and in all subjects. It is evident that this method helps learners gain concrete knowledge related to the subject matter. The government of Jordan needs to incorporate more policies and strategies to implement this learning process at all levels, making the entire curriculum attractive and effective in terms of ensuring a better future for the children. Incorporation of proper training methods is required for the teachers to ensure the rapid utilisation of constructive methods in the teaching-learning process across the nation at all levels.

Acknowledgments

This work has been carried out during sabbatical leave granted to the author, Nibal Malkawi, from Al Balqa Applied University (BAU) during the academic year 2023/2024.

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Nibal Malkawi is an associate professor of curriculum and methods of teaching English. She is a dean's assistant for quality assurance at Amman College/BAU. Her areas of interest are curriculum development, e-learning, blended learning, teacher training, and educational evaluation.