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The Educational Systems Components and Their Effects on Understanding the Learning Content among Jordanian Universities EFL Students

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ABSTRACT

This study aims to examine the relationship between the components of the educational systems and their effects on comprehending the educational content among Jordanian university EFL students. The study employed a descriptive-analytical approach and included a sample of 409 male and female students randomly selected from Jordanian universities in the academic year 2024\2025. A 28-item research instrument was designed to measure the impact of components of the educational system on comprehension of educational content, divided into three dimensions: teaching strategies component (10 items), the role of the teacher component (8 items), and university administration component (10 items) of which constructed according to the five Likert scale. The study results showed that the impact of teaching strategies, the teacher, and university administration on achieving content comprehension was moderate, with the highest impact being achieved by teaching strategies that take into account a variety of learning styles. The preferred learning style was also found to be the most influential factor in content comprehension, while no statistically significant differences were found based on gender or major variables. The study recommended promoting the use of diverse teaching methods and providing appropriate academic support by teachers and university administration to improve EFL students' comprehension of academic content. Moreover, Improve communication between EFL instructors and students through online platforms. Stay current with technological advancements in education to enhance teaching effectiveness.

Keywords: Educational Systems; Educational Content; Understanding; Jordanian Universities

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1. Introduction

Integrated educational systems are considered essential factors that contribute to improving the quality of education and raising the level of EFL students' understanding of academic content, particularly within university settings. In the context of university education in Jordan, components of the educational system such as curricula, educational technologies, teaching methods, and the learning environment play a crucial role in enhancing EFL students' ability to absorb and understand academic materials. Kalyani (2024) shed light on how technology integration in educational settings has changed traditional teaching practices and empowered learners for success in an increasingly digital world through a thorough review of pertinent literature and empirical evidence [1]. The importance of these components increases in light of modern technological developments and academic challenges facing students, as effectively designed educational systems can lead to improved learning outcomes and increased interaction and participation.

The world of knowledge and technological technology has witnessed an increasing interest in educational systems and providing qualified manpower to perform various roles with great precision, using the systems approach in analyzing problems, and describing appropriate treatment by developing specific strategies for each problem that may occur, and being able to keep pace with the increasing development in contemporary educational systems and how to manage them in light of organizational thinking. Education is considered one of the most important tributaries that provide society with effective and influential human cadres. Universities are the main incubators of educational systems and the main source of talent and creativity. Societies that seek development and progress are keen to provide everything they can to develop this sector and support it with all its capabilities and overcome all difficulties for the sake of difficulties in order to reach this sector to the highest level so that they can achieve their achievements through it and address their problems and distinguish themselves from other nations [2].

This research aims to explore the relationship between the components of the educational system and their impact on the degree of understanding of academic content among Jordanian university EFL students, with a focus on how these components contribute to creating an interactive educational environment that supports academic achievement and the development of EFL students' intellectual skills. The educational and learning environment has changed from what was prevalent at the beginning of this century. Moreover, systems have begun to replace or take over a number of students and teachers in place of many traditional systems [3].

The difference and the new emergence of these system s sparked both criticism and enthusiasm with face-to-face e ducation to distance education, then blended education, and each system has its own advantages, disadvantages, and con stituents. In which the degree of understanding the learning content by the EFL student is related to his/her desire and re adiness, and the possession of some skills and abilities [4].

The research seeks to determine the relationship of the foundations or components of the educational process in various learning systems to the degree to which EFL students of public and private Jordanian universities understand the learning content. The study seeks to achieve the following objectives:

1) Show the degree of contribution of teaching strategies in achieving content understanding among EFL students.
2) Show the degree of contribution of the EFL teacher in achieving content understanding among EFL students.
3) Show the degree of contribution of the university administration in achieving content understanding among EFL students.
4) Show the extent of the existence of statistically significant differences at the significance level (0.05) in the responses of the study individuals attributed to the study variables (gender, specialization, preferred teaching method).

The problem of the study is that understanding educational content is a key factor affecting the quality of learning and EFL students' academic achievement. With the rapid development of educational systems, it has become necessary to study the relationship between the components of modern educational systems and their impact on EFL students' comprehension of learning content. In Jordanian universities, EFL students face multiple challenges related to the way information is presented, the use of technology, and their interaction with educational content. Therefore, this study seeks to analyze the relationship between the components of educational systems including curricula, digital technologies, teaching methods, and educational infrastructure and Jordanian university EFL students' comprehension of educational content. It also aims to identify the factors that enhance or hinder comprehension, contributing to the development of more effective educational strategies. What is the relationship between the components of educational systems and the understanding of learning content among Jordanian university EFL students? This results in the following questions:

1) To what extent do teaching strategies, the EFL teacher, and the university administration contribute to EFL students' understanding of the educational content?
2) Are there statistically significant differences at the significance level (0.05) in the responses of study individuals, due to the study variables (gender, specialization, preferred education style)?

The importance of this study stems from the assistance it may provide to EFL teachers and those responsible for preparing training programs in the Ministry of Education and those responsible for designing and developing EFL curricula, for developing their performance in carrying out their professional tasks. Its importance also emerges from the variables of the study on which it was based, and it is hoped that the results of this study will be used in developing the EFL curriculum and teaching methods. It may enrich the theoretical literature, as it is one of the few studies, within the researcher's knowledge, that has addressed the relationship between educational elements and EFL students' level of understanding of academic content.

2. Literature Review

Educational Systems

Educational systems represent the rules and regulations within which the educational process takes place, and the success of any educational system is measured by the extent to which the educational process achieves its objectives in terms of quantity and quality, in accordance with the expenses it incurs. The educational system consists of components that interact with each other according to specific rules and procedures [5], which are:

- Inputs: This refers to the human and material capabilities necessary for the system to operate, and the inputs may be symbolic, human, or material, as they are the factors of influence that stimulate the movement of a system and push it to behavior and move it from a certain level of behavior to another level.

- Operations: This refers to the educational process in educational institutions, which is represented by teaching processes and curricula; the curricula must be modern, keeping pace with cultural and scientific developments and are compatible with the requirements of the environment and society.

- Outputs: They refer to the results of the operations carried out on the inputs and include the preparation of graduates from students who meet the qualitative and quantitative conditions.

Curriculum: The curriculum is an essential element of education; in fact, it is the most important, and it is the core and foundation of education. It is the means to achieve educational and national goals and the way to prepare future generations who are considered the nation's assets and the path to a happier future and a better world in which trust, reassurance and peace prevail. Curricula are used to educate citizens and correct citizenship, and curricula should not stop at knowledge, but rather focus on providing the skills necessary to examine social systems in a critical manner in light of basic democratic values. Thus, knowledge of curricula becomes important because it increases insight into modern social problems [6]. The curriculum in its broad sense includes all aspects of student activity, inside and outside the university or school, under the guidance and supervision of the university or school, i.e., it is the life that students live under the guidance and supervision of the school or university. Here, all the experiences acquired within this curriculum are included in all aspects of the student that are concerned with growth. The curriculum is therefore a plan, the plan has components, and Taylor identified the four components of the curriculum in his famous model in four aspects, which are educational goals, providing educational experiences, organizing educational experiences, and evaluating educational goals [7]. What follows is the theoretical framework of the research**,** first, the constructivist theory of learning—Which is a modern theory attributed to Jean Piaget between 1980–1986 AD. The theory has historical roots that go back to Socrates, Plato and Aristotle; someone says that we must rely on sensory experiences, when individuals search for truth; the idea of the theory is that knowledge is actively built by the learner and does not passively receive it from the surrounding environment. Moreover, the knowledge construction takes place inside the mind of the learner, and what he receives is explained to build meaning [8]. Society affects the cognitive construction of the individual, and inference is a necessary condition for concept formation. Error and understanding are two important conditions for learning, which is built through experience rather than memorization. The theory is based on several concepts, the most important of which are: adaptation, adaptation, comprehension, convenience, self-control, representation, symbolic function, organized behavioral models, and tangible practical activities. In order to build the knowledge of the educated individual, contemporary teaching strategies must be adopted, such as assigning tasks to students, preparing, presenting and discussing the pedagogical project, interactive learning, cooperation learning, and flipped learning. Moreover, intensifying the use of applications tools that have professional nature within the virtual classes or the tools available in the traditional classroom [9].

The following is a breakdown of the concepts of the theory [10].

- Construction of knowledge: Knowledge is considered a personal construction, as the learner forms meanings and understands the world through his personal experience. Knowledge is not just a transfer of information from the teacher to the learner, but rather an active process in which the learner builds his own understanding.
- Interaction with the environment: Learning is enhanced through continuous interaction with the environment, whether it is a social environment (such as interaction with peers and teachers) or a physical environment (such as using educational

tools).

- Active learning: Learning occurs best when the learner is active and participates in the learning process through practical experiences, problem solving, and discovery.
- The role of prior experiences: Learning relies heavily on the learner's prior experiences, as these experiences are used as a basis for understanding new information and building new knowledge.
- Learning as a social process: Social interactions with peers and teachers are essential for developing knowledge, as discussions and dialogues help challenge ideas and expand understanding. The practical applications of constructivism in education [11]:
  - Project-based learning: EFL Students participate in practical projects that help them apply theoretical knowledge in real-life situations.
  - Cooperative learning: Allows EFL students to learn from each other through group work and discussions.
  - Discovery learning: Encourages EFL students to discover information on their own rather than presenting it directly, which enhances their understanding and comprehension.
  - Using open-ended questions: Encouraging EFL students to ask questions and generate discussions enables them to think deeply and build new knowledge.
  - Rab et al. (2023) outlined that Constructivism is one of the most influential theories in the field of education, as it emphasizes the active role of the learner in building knowledge and developing critical and creative thinking skills [12]. Secondly, the theory of selective learning, which is a theory concerned with understanding how individuals select the information they learn and care about from among the vast amount of stimuli and information available. This theory is based on the idea that individuals do not learn everything they are exposed to, but rather select the information that aligns with their interests, needs, and level of attention. The importance of the theory lies in improving the quality of learning: by focusing the learner on only the important information, learning efficiency is improved and understanding is increased. Reducing mental stress: By selecting information, it helps reduce the cognitive load on the brain, making the learning process less stressful and more enjoyable. In addition, by enhancing recall by focusing on relevant information, the individual's ability to remember information for a longer period improves. Selective learning theory is useful in designing educational and training environments, as it also emphasizes the importance of taking into account individual differences in attention and interests to achieve a more effective and meaningful learning experience.

Basic concepts of selective learning theory [13]:

- Selective attention: Individuals tend to focus on certain information that aligns with their current interests or needs, while ignoring other information. Selective attention allows them to learn more efficiently by reducing cognitive load.
- Selective memory: Individuals remember information that is relevant or important to them, meaning that the process of storing information is not random, but rather depends on how relevant this information is to the learner's personal goals.
- Cognitive filtering: The mind filters incoming information, retaining relevant information and filtering out noise or unnecessary information.
- Intrinsic motivation: An individual's motivations greatly influence what they choose to learn. People tend to learn information that aligns with their personal motivations and interests.
- Experiential learning: Individuals rely on their previous experiences to choose the information they want to learn or that they feel will be useful to them.

Practical applications of selective learning theory [14]:

- Curriculum design: This theory can be used to design curricula that take into account students' interests and orientations, which enhances their ability to learn and understand.
- Personalized and personalized learning: Allows for the preparation of educational programs designed according to individuals' needs and preferences, which increases the effectiveness of learning.
- Attention-getting strategies in education: Using attention-getting strategies such as engaging stories, open-ended questions, and real-life examples can enhance students' ability to selectively pay attention to important information.
- Educational technology applications: Educational applications and tools can be designed to take into account students' preferences and direct them toward the information that is most important to them.

The following is a presentation of previous studies, presented in chronological order:

Al-Nawafleh's study (2024) aimed to identify effective teaching strategies and the obstacles to teaching Arabic [15]. The study community consisted of all Arabic language teachers, and the size of the study sample was (170) male and female teachers. It relied on the descriptive analytical approach. The results of the study showed a high impact of teaching strategies on students.

Kilani's study (2020) aimed to demonstrate inspirational leadership in improving the educational process in the Education Department in Riyadh [16]. It followed the descriptive correlational approach. The study community consisted of all male and female principals of public education schools. One hundred seventy-five responses from the principals were collected, and a questionnaire was prepared. It was found that the practice of inspirational leadership in the Education Department was high, and that the improvement of the educational process

reached a high level. It also showed the existence of a statistically significant relationship between the application of inspirational leadership and the improvement of the educational process.

Al-Azzam's study (2020) aimed to clarify the effect of the cooperative learning strategy in improving the performance of eighth grade students in reading comprehension and learning motivation [17]. It was based on the quasi-experimental approach, in a sample size of (70) male and female students. The results of the study showed the presence of a statistically significant effect in the responses of the study individuals attributed to the experimental group that studied using the cooperative learning strategy in the reading comprehension test and the learning motivation scale.

Rahim (2019) investigates the use of blended learning approach in EFL education and undertakes an in-depth review of literature, practices, and authentic enhancements of blended learning in the context of EFL education [18]. The study enriches creative ideas toward the use of blended learning approaches in EFL classrooms. It indicates that blended learning approach provides a flexible language-learning platform; endorse academic achievements of the learners, and influences EFL education.

Wright (2017) investigates the EFL students' responses to an online lesson as part of an English grammar course, and investigates common student perceptions of the online lesson as compared with face-to-face lessons [19]. To determine common student perceptions, with particular reference to motivation and interest. The findings reveal that more students associated in-class lessons with higher motivation and more interest, due to better understanding, valued classroom interaction with the lecturer and peers, and input from the lecturer. Students preferring the online lesson cited speed and convenience of study and flexibility of time and place of study as reasons for their choice. Skillful implementation of online lessons can enhance a language course but should not undermine the value of face-to-face instruction with EFL teachers.

The study benefited from previous studies in defining the study problem and study methodology, and in constructing the study tool. The methodology of this study differed from Al-Azzam's study (2020) where this study used the experimental method, while it was similar to Al-Nawfalah's study (2024), and Kilani's study (2020) in terms of its reliance on the descriptive method, and was similar to previous studies in constructing a questionnaire tool to collect data [20–22]. This research focused on clarifying the impact of educational system components on EFL students' level of understanding of academic content. This is what distinguishes the current study.

3. Methodology

This section presents an explanation of the procedures carried out by the researcher to achieve the research objectives. It includes a description of the methodology followed in the research, a description of the study community and the sample that was selected, in addition to the research tools and methods of verifying their validity and reliability, in addition to the statistical methods responsible for analyzing the results and answering the questions and research procedures.

This study was based on the descriptive analytical method, as it is appropriate for the research objectives.

3.1. Population and Sample

The study population represents all EFL students at Jordanian universities that adopt multiple learning systems. According to the 2023 report issued by the Department of Statistics in Jordan, the number of EFL students at Jordanian public and private universities reached approximately 220,000. This number is considered an estimate as it varies from year to year based on academic enrollment at different universities. The study sample size was determined based on the Morgan and Krejcie table to select an appropriate sample size, which amounted to 409 students (**Table 1**) [2, 23, 24].

Table 1. Frequencies and Percentages of Study Variables.

Variable	Category	Frequency	Percentage
Gender	Male	165	40.3
	Female	244	59.7
Specialization	Humanities and Social Sciences	151	36.9
	Medical and Engineering Sciences	111	27.1
	Natural Sciences	90	22.0
	Administrative and Technical Sciences	57	13.9
Preferred type of learning	Face-to-face	122	29.8
	E-learning (distance learning)	57	14.0
	Blended Learning	230	56.2
Total		409	%100

3.2. Study Tool

The researcher developed a specialized instrument to investigate the relationship between the components of educational systems and the level of understanding of learning content among Jordanian university EFL students. The initial version of the tool consisted of 28 items distributed across three dimensions related to this relationship, as follows:

- **First Dimension:** Teaching strategies component – 10 items
- **Second Dimension:** Teacher component – 8 items
- **Third Dimension:** University administration component – 10 items

The tool was constructed based on the Likert scale, adopting a five-point response format. Each item in the questionnaire offered five response options, each assigned a numerical weight as follows:

- *Strongly agree* = 5
- *Agree* = 4
- *Neutral* = 3
- *Disagree* = 2
- *Strongly disagree* = 1

To interpret the arithmetic means of the participants' responses, the following statistical scale was used:

- **Low** (1.00–2.33)
- **Moderate** (2.34–3.66)
- **High** (3.67–5.00)

The category range was calculated using the formula:

$$(Highest\ value - Lowest\ value) \div Number\ of\ categories = (5 - 1) \div 3 = 1.33$$

3.3. Psychometric Properties

(1) Face Validity

The questionnaire was reviewed by ten referees, including specialists and experts, to ensure its face validity. They were asked to evaluate the clarity, linguistic accuracy, and appropriateness of each item in relation to its dimension. Additionally, they provided suggestions for revisions, including deletions and additions. All feedback was considered in refining the instrument into its final version.

(2) Construct Validity

After establishing face validity, the instrument was administered to a pilot sample from outside the main study population. This was done to calculate the correlation coefficients between each item and its corresponding dimension in order to determine the extent to which the items accurately measured the intended constructs.

It is noted from **Table 2** that the correlation values of the items with their respective dimensions ranged between 0.384 and 0.670. These values are considered educationally acceptable; therefore, all items in the tool were retained.

Table 2. Correlation Coefficients of the Relationship Tool of Educational Systems Components with the Level of Understanding of Learning Content.

N	Correlation Coefficient	N	Correlation Coefficient	N	Correlation Coefficient
	First Field		Second Field		Third Field
1	**0.543	11	**0.513	19	**0.439
2	**0.578	12	**0.482	20	**0.473
3	**0.610	13	**0.596	21	**0.506
4	**0.384	14	**0.670	22	**0.515
5	**0.472	15	**0.629	23	**0.593
6	**0.522	16	**0.507	24	**0.521
7	**0.618	17	**0.579	25	**0.546
8	**0.510	18	**0.498	26	**0.424
9	**0.595			27	**0.508
10	**0.409			28	**0.449

Regarding the reliability of the study tool, the internal consistency coefficient (Cronbach's alpha) was calculated for all dimensions of the instrument, and the results were as follows (**Table 3**).

Table 3 shows that the overall reliability of the tool reached 0.905, while the reliability values of the tool's dimensions ranged between 0.822 and 0.860. These values are considered sufficient to serve the objectives of the study and allow for the generalization of its findings.

(3) Statistical Processing

The Statistical Package for the Social Sciences (SPSS) was used to analyze the study data and derive the results. Several statistical methods were employed, including descriptive statistics and the calculation of Cronbach's alpha, to assess the internal consistency reliability of the tool. Additionally, the independent samples *t*-test and one-way analysis of variance (ANOVA) were applied based on the study variables.

Table 3. Internal Consistency Coefficient (Cronbach's Alpha) For the Tool Measuring the Relationship Between Components of Educational Systems and the Level of Understanding of Learning Content and Its Dimensions.

Field	Cronbach's Alpha Coefficient
Teaching strategies	0.860
The teacher	0.829
University administration	0.822
Total	0.905

4. Results and Conclusions

This section presents the study findings, aiming to reveal the relationship between the components of educational systems and the level of understanding of learning content among EFL students.

Regarding the first research question:

"What is the degree of contribution of teaching strategies to achieving content understanding among EFL students?"

Arithmetic means and standard deviations were calculated for the items related to the teaching strategies dimension (**Table 4**).

Table 4. Arithmetic Means and Standard Deviations of the Paragraphs of the Dimensions of Teaching Strategies.

N	Items	Mean	S.t deviation	Rank	Level
1	It attracts our attention to the lecture.	3.33	1.13	9	Medium
2	It increases our level of understanding of the educational material.	3.51	1.08	7	Medium
3	It helps us develop and progress.	3.34	1.12	8	Medium
4	It takes into account the individual differences between us as students in the same group.	4.07	0.97	1	High
5	It increases the level of our educational and practical experience.	3.84	1.16	5	High
6	It enhances our self-confidence and self-esteem.	3.58	1.15	6	Medium
7	It provides teachers with valuable feedback on our level of progress. Which allows them to adjust the students' learning style.	3.27	1.13	10	Medium
8	It contributes to establishing good relationships with colleagues and teachers.	3.80	1.04	4	High
9	It provides us with opportunities to express our diverse points of view.	3.85	1.02	3	High
10	It helps in developing good plans that include clear goals.	3.92	0.96	2	High
	Teaching strategies	3.65	0.72		Medium

It is clear from **Table 4** that the degree of contribution of teaching strategies to achieving learning understanding reached a mean of 3.65, which is considered a medium level. The arithmetic means of the items under the "teaching strategies" dimension ranged between 4.07 and 3.27, indicating both high and medium levels. Item (4), which stated, *"It takes into account the individual differences between us as students in the same group,"* recorded the highest mean (4.07). In contrast, item (7), which stated, *"It provides teachers with valuable feedback on our level of progress, which allows them to adjust the EFL students' learning style,"* recorded the lowest mean (3.27).

This result can be attributed to the fact that the teaching methods are based on several important factors that address learning diversity, such as active learning, cooperative learning, and problem-solving approaches using auditory, kinesthetic, and visual methods. These methods emphasize interaction and participation between EFL students and teachers during lessons, which enhances understanding through discussion and questioning. They also provide continuous and immediate feedback that helps students correct their mistakes and improve their performance, thereby enhancing their understanding of academic content. Furthermore, some teaching methods allow for the adaptation of educational activities to accommodate students' varying abilities, enabling each student to learn in the manner that best suits their learning preferences.

Results of the second question, which stated: ***"What is the degree of contribution of the EFL teacher in achieving content understanding among EFL students?"***

The arithmetic means and standard deviations were calculated for the items under the EFL teachers' dimension (**Table 5**).

Table 5. Arithmetic Means and Standard Deviations of the EFL Teacher Dimensions' Paragraphs.

N	Items	Mean	S.t deviation	Rank	Level
1	Uses diverse methods that clarify my understanding of the educational content.	4.21	0.89	1	High
2	Works to encourage us to ask diverse questions and inquiries.	3.36	1.18	3	Medium
3	Works to provide additional support when we encounter confusion in understanding some information and data.	2.89	1.23	8	Medium
4	Provides us with constructive comments that improve the level of understanding of the subject matter.	3.16	1.19	4	High
5	Provides us with feedback that improves academic performance.	3.07	1.24	6	High
6	Motivates us to buy educational topics.	3.89	1.83	2	High
7	Motivates us not to miss lectures.	2.91	1.28	7	Medium
8	Makes us love the curricula.	3.15	1.23	5	Medium
	Teacher dimensions	**3.33**	**0.78**		**Medium**

It is clear from **Table 5** that the overall degree of contribution reached a mean of 3.33, which is considered a medium level. The arithmetic means of the items under the "EFL teacher" dimension ranged between 4.21 and 2.89, indicating both high and medium levels. Item (1), which stated, *"Uses diverse methods that clarify my understanding of the educational content,"* recorded the highest mean (4.21). In contrast, item (3), which stated, *"Works to provide additional support when we encounter confusion in understanding some information and data,"* recorded the lowest mean (2.89).

This result is attributed to the EFL teachers' awareness of the importance of their role and their contribution to achieving high levels of efficiency and effectiveness in the educational process. The teacher serves as a guide and mentor to EFL students, helping them focus on the main points of the content and guiding them to understand complex concepts through explanation and clarification. In addition, the teacher employs various teaching methods suited to students' needs, such as explanation, discussion, practical applications, and the use of diverse educational tools, all of which contribute to a better understanding of the content. Moreover, the teacher takes into account individual differences among students, adapting teaching methods and activities to meet their varying levels and needs. This flexibility helps each student understand the material in the way that suits them best.

Results of the third question, which stated: ***"What is the degree of contribution of the university administration in achieving understanding of the content among EFL students?"***

The arithmetic means and standard deviations were calculated for the items under the university administration dimension (**Table 6**).

Table 6. Arithmetic Means and Standard Deviations of The Paragraphs of The Dimensions of University Administration.

N	Items	mean	S.t deviation	Rank	Level
1	Provides training programs for faculty members to develop their skills in using various teaching methods.	3.29	1.31	5	Medium
2	Works to provide equipment and tools for active learning strategies.	3.26	1.26	7	Medium
3	Provides adequate support for students facing academic difficulties.	3.64	1.16	2	Medium
4	Contributes to providing various educational resources, such as libraries and electronic databases.	3.48	1.15	4	Medium
5	Works to provide the necessary technical and technological support to benefit from e-learning platforms**.**	2.74	1.35	9	Medium
6	Provides training courses that help students gain special skills in understanding content and analyzing information.	2.44	1.35	10	Medium
7	Provides academic guidance services for students to determine the most appropriate courses for them and how to benefit from educational materials.	3.23	1.30	8	Medium
8	Encourages the creation of effective communication between professors and students via electronic platforms.	3.52	1.57	3	Medium
9	It monitors the level of students' understanding through tests.	3.28	1.23	6	Medium
10	Provides additional and interactive study materials that enable students to learn in a way that suits them.	3.83	1.08	1	High
	The dimensions of university administration	**3.27**	**0.79**		**Medium**

It is clear from **Table 6** that the degree of the university administration's contribution to achieving content understanding scored a mean of 3.27, which indicates a medium level. The arithmetic means of the items under this dimension ranged between 3.83 and 2.44, reflecting both high and medium levels. Item (10), which stated *"Provides additional and interactive study materials that enable EFL students to learn in a way that suits them,"*

recorded the highest mean (3.83). In contrast, item (6), which stated *"Provides training courses that help EFL students gain special skills in understanding content and analyzing information,"* recorded the lowest mean (2.44).

The university administration's contribution to content understanding can be attributed to several fundamental factors that play a key role in enhancing the quality of the educational process and supporting the academic environment. These include providing essential resources such as libraries, laboratories, electronic systems, and educational platforms that facilitate access to academic content, thereby improving EFL students' learning and comprehension. Furthermore, the administration works on updating and developing EFL curricula in accordance with current advancements in various fields, ensuring the availability of relevant and updated content aligned with labor market demands. Additionally, the university organizes training courses and practical workshops to enhance the qualifications of faculty members.

Results of the fourth question, which stated: ***"Are there statistically significant differences at the significance level (0.05) in the responses of study participants based on the variables of gender, specialization, and preferred learning style?"***

To address this question, the arithmetic means and standard deviations of participants' responses were calculated according to the variables of gender, specialization, and preferred learning style, as shown in **Table 7**.

Table 7 shows apparent differences between the arithmetic means of the dimensions of the Relationship Between Education Systems for Understanding Learning Content according to the variables of gender, specialization, and preferred learning style. To verify the validity of these apparent differences at the overall score level, a Three-way analysis of variance was used, as shown in **Table 8**.

Table 7. Arithmetic Means and Standard Deviations of the Study Tool According to the Study Variables.

Variable	Category	Statistical	Teaching Strategies	The Teacher	University Administration	Total
Gender	Male	mean	3.62	3.29	3.41	3.45
		s.t deviation	0.77	0.741	0.78	0.65
	Female	mean	3.67	3.36	3.18	3.41
		s.t deviation	0.67	0.77	0.79	0.61
Specialization	Humanities and Social Sciences	mean	3.63	3.37	3.24	3.42
		s.t deviation	0.66	0.81	0.84	0.63
	Medical and Engineering Sciences	mean	3.69	3.79	3.57	3.41
		s.t deviation	0.74	0.69	0.72	0.58
	Natural Sciences	mean	3.59	3.19	3.21	3.34
		s.t deviation	0.77	0.85	0.77	0.68
	Administrative and Technical Sciences	mean	3.72	3.52	3.52	3.59
		s.t deviation	0.74	0.79	0.80	0.59
Preferred type of learning:	Face-to-face	mean	3.68	3.46	3.41	3.52
		s.t deviation	0.63	0.78	0.84	0.60
	distance learning	mean	3.80	3.43	3.29	3.51
		s.t deviation	0.87	0.83	0.79	0.68
	Blended Learning	mean	3.59	3.24	3.21	3.35
		s.t deviation	0.72	0.78	0.76	0.62

Table 8. Results of the Three-Way Analysis of Variance (3-Way ANOVA) For the Relationship Between Education Systems to Understand Learning Content, With Its Overall Significance According to the Study Variables.

Source of Variance	Sum of Squares	Mean Sum of Squares	Calculated F Value	P-Value
Gender	0.065	0.065	0.411	0.522
Preferred type of learning	1.338	0.446	2.803	0.041*
Specialization	1.237	0.412	2.592	0.054
Error	33.083	0.159		
All	35.723			

* Statistically Significant at the (0.05) Level.

The 3-way ANOVA findings in **Table 8** demonstrate a statistically valuable relationship between teaching methods and educational comprehension levels (P-value = 0.041). Statistical data reveal the lack of significant relationship between gender distribution and participant understanding of content because the P-value reached 0.522. Educational understanding experiences a slight but insignificant effect from specialization according to its P-value of 0.054. The findings establish the preferred teaching method as the key variable contributing to educational

understanding between the investigated elements since gender and specialization proved statistically insignificant in this research.

A 3-way MANOVA was also used to demonstrate the effect of the variables (gender, major, preferred learning style) on the sub-dimensions of comprehension of educational content, as shown in **Table 9**.

A **Multivariate Analysis of Variance (MANOVA)** was conducted to evaluate the influence of the variables—**gender, major,** and **preferred learning style**—on the sub-dimensions of educational content comprehension, as shown in **Table 9**. The statistical analysis highlights how these variables impact teaching methods, instructor performance, and university leadership, while identifying which variables significantly affect the study outcomes.

Table 9. Results of the Three-Way ANOVA For the Sub-Dimensions of Understanding Educational Content According to the Study Variables.

Source of Variance	Dependent Variable	Sum of Squares	Mean Sum of Squares	Calculated F-Value	P-value
Gender	Teaching strategies	0.290	0.29	0.803	0.371
	The teacher	0.027	0.027	0.073	0.788
Hotelling's Trace= 0.008 Sig= 0.973	University administration	0.230	0.230	0.491	0.484
Preferred type of learnin	Teaching strategies	2.882	0.961	2.656	*0.049
	The teacher	3.205	1.068	2.841	*0.042
Wilks' Lambda= 0.902 Sig= 0.045*	University administration	4.079	1.360	2.905	*0.039
Specialization	Teaching strategies	0.705	0.235	0.649	0.627
	The teacher	1.458	0.486	1.293	0.278
Wilks' Lambda= 0.917 Sig= 0.119	University administration	0.672	0.224	0.478	0.698
	Teaching strategies	75.225	0.362		
	The teacher	78.197	0.376		
Error	University administration	97.406	0.468		
	Teaching strategies	79.102			
Total	The teacher	82.887			
	University administration	102.387			

Gender did not yield any statistically significant differences across the sub-dimensions of educational content comprehension. All F-statistics were low, and the corresponding p-values exceeded the 0.05 threshold. Therefore, gender was found to be an insignificant factor in explaining students' understanding of educational content.

In contrast, the evaluation of **preferred learning style** revealed statistically significant results across all sub-dimensions. F-values exceeded 2.6, and p-values were below 0.05, indicating that preferred learning style plays a crucial role in determining EFL students' comprehension of educational content—particularly in relation to teaching methods, instructor effectiveness, and university management practices.

Regarding the **major** variable, the analysis showed no statistically significant effects. EFL students' comprehension of educational content was not influenced by their field of study, as F-values were minimal and p-values exceeded 0.05.

This analysis concludes that **preferred learning style** is a strong determinant of educational content comprehension, whereas **gender** and **major** do not exert meaningful influence within the context of this study.

Recommendations based on the findings:

- Enhance the use of diverse teaching strategies to accommodate the varying needs of EFL students.
- Increase academic support for EFL students experiencing difficulties in comprehension.
- Improve communication between EFL instructors and students through online platforms.
- Stay current with technological advancements in education to enhance teaching effectiveness.

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Informed Consent Statement

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Conflicts of Interest

The Author declares that there is no conflict of interest.

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