Common Learning Styles among Students of Al-Balqa Applied University and the Impact of Some Variables

Dr. Nieveen Mohammad Abuzaid

Associate Professor, Princess Alia University, Al Balqa Applied University, Jordan,
nieveen.zaid888@gmail.com

Abstract

The current study aimed to identify the common learning styles of Al-Balqa Applied University students and the impact of some variables such as university branch, gender, academic program, academic year, specialization, and the General Point Average (GPA). The study sample consisted of (690) male and female students selected by random cluster method. The researcher used the Index of Learning Styles (ILS of Felder and Silverman), which consisted of 44 items, to assess learning preferences. After using the SPSS statistical analysis program, the study results showed that the common learning styles were arranged in descending order as follows (active/ reflective, visual/ verbal, comprehensive/ sequential, sensory/ intuitive). The results also showed that there were statistically significant differences in favor of the university branch variable - Princess Rahma College and Al-Huson University College, where the verbal-visual learning style was more common, as well as statistically significant differences in the gender variable, as the sequential learning style is more common among females. The results also showed that there were no statistically significant differences at the significance level ($50.0 \leq \alpha$) for the variables of the study program, academic year, specialization, and general point average (GPA).

Keywords: Learning Styles, Al-Balqa Applied University, ILS Index.

Introduction

The learning process is the essence of the educational process and the primary goal that seeks to achieve the educational system, and since learning embodies an invisible psychological process that occurs as a result of changes in the cognitive structure of students, and understanding how this process occurs is an essential focus in choosing its cognitive strategies, as imposed by individual differences between students and their learning styles. Therefore, the learning styles that the student prefers are considered essential and fundamental matters that the teacher and the student must be familiar with to improve the student's knowledge acquisition methods because knowing the student's distinctive learning style makes the learning process more efficient and effective. Through it, the teacher can provide the appropriate experiences and the student's learning style. On the contrary, when the experiences are presented in a way that is different from the educational style preferred by

the student, the learning becomes less efficient, effective, and more complex. Therefore, the initial benefit of learning styles is to look at them as a tool to think about individual differences and to help students discover their educational methods, allowing them to come up with tools that can be used to solve school issues and, in many situations, outside of school (Merniz, 2021).

Learning styles refer to how each student learns best and differs from one individual to another. Learning styles vary from discovery learning to cooperative learning to group learning to self-learning to learning by model. It is also defined as the learning styles that express the differences in individuals' learning. The learning style is a relatively permanent and distinctive trend for many intellectual activities, tasks, and compatibility. Malcood (1981) defined it as how the individual addresses educational and social problems based on the experiences available in the individual's knowledge store and the external environment affecting education (Al-Yousifi,

2009). Kolb defined it as "the method that an individual uses to perceive and process information during the learning process" (Al-Ghamdi, 2013). The built benefit of learning styles is that it is seen as a tool for thinking about individual differences and helps students discover their learning styles, allowing them to come up with tools that can be used to solve problems related to school topics and in out-of-school situations.

The lecturer's knowledge of the pattern that the learner uses to receive knowledge and information helps him provide understandable and meaningful experiences. This facilitates learning and increases the learner's interest and attention. Whoever knows his students, and learns from their thinking, methods of assimilation, and understanding has secured respect, appreciation, and respect for them, and himself as well. The lecturer is for what he benefits his students, not only for what he knows (Qatami and Qatami, 2000).

The importance of the topic lies in the fact that referring to the learner's learning patterns helps the teacher adapt educational strategies to enhance and strengthen the individual's learning, and it also helps students take greater responsibility for their learning conditions. One of the aims of education is to help students build their skills based on their preferred methods, and this gives the student opportunities to progress in performing the tasks assigned to him more successfully and thus increase his ability to think in general and scientific thinking in particular (Hamdan, 2008).

The Study Problem

The students of Al-Balqa Applied University are the focus of researchers' attention, as the lecturers face large numbers of students in the same division who differ in their abilities and educational styles; some of them prefer the realistic or integrated style. In contrast, others prefer the perceptual, linguistic, or visual-verbal learning style. The more the lecturers are aware of the student's different learning styles, the more diversification occurs in the strategies and methods of teaching. Many educators called for respecting diversity among students, especially during designing courses and choosing the optimal method of teaching (Hou, 2015 & Kumar et al., 2012). Therefore, the problem of

the study stems from the fact that the students have various educational and learning styles. The study came to know the common learning styles of Al-Balqa Applied University students and the impact of some variables on them, which provides the faculty members with a broad ground that enables them to diversify into teaching methods that correspond to the common learning styles of their students and lead to meaningful learning that both the lecturer and the student seek. The research problem has been formulated and identified in the following central question:

What are the common learning styles of Al-Balqa Applied University students? What is the effect of some independent variables on it?

The Study Questions

This study seeks to answer the following questions:

1.   What are the common learning styles of Al-Balqa Applied University students?
2.   Are there statistically significant differences at the significance level ($\alpha \leq 0.05$) in learning styles due to the variables of university branch, gender, academic program, academic year, specialization, general point average (GPA)?

Objectives of the study

The study aims to find out:

-       Common learning styles of Al-Balqa Applied University students.
-       Common learning patterns among Al-Balqa Applied University students according to the variables (university branch, gender, academic program, academic year, specialization, general point average (GPA)).

Significance of the Study

The importance of this study stems from the following points:

-       First, helping to improve the teaching-learning process for students of Al-Balqa Applied University, since teaching, in general, tends to prepare students to possess the skills

necessary for different educational styles, considering their preferences and ways of thinking.

\- The study results will have a clear impact on the faculty members, as they help them choose the method that matches the common learning styles, the nature of the material, and the available capabilities to get the best possible educational outcome.

The limits of the study

Objective limits: Learning styles were restricted to styles according to the Learning Style Index (ILS) (LitZinger et al., 2005).

Time limits: The study was applied in the second semester of 2020/2021.

Spatial limits: The study was applied at Al-Balqa Applied University, Salt College for Human Sciences, Princess Rahma College, and Al-Huson University College.

Definition of Terms

Learning styles: defined as cognitive, emotional, or physiological behaviors that characterize learners, and they serve as relatively stable indicators of how these learners perceive, deal with and respond to their educational environment (Abu Al-Nadi et al., 2016). Sek et al. (2016) also defined it as the different ways people receive information, process it, evaluate it, understand it, and use it for learning. In this study, the learning styles represented by learning methods (active/reflective, sensory/intuitive, visual/verbal, sequential/holistic) were adopted and defined procedurally according to (Hamida, 2015) as follows:

Active/reflective style: the learner's tendency to obtain and understand information either through practical procedures or by thinking about it calmly first, and it is measured by the degree to which the subject gets on the items that represent this method in the study tool that was prepared to measure the active/reflective style.

Sensory/intuitive style: the learner's tendency to either learn facts and pay attention to details, or discover relationships and possibilities, it is measured by the degree that the examinee obtains on the items that represent this method in the study tool that was prepared to measure the sensory/intuitive method.

Visual/verbal style: the learner's tendency to work with pictures, charts, graphs, words, sentences, written texts, and verbal directions is measured by the degree that the examinee obtains on the items that represent this method in the study tool that was prepared to measure the visual/verbal method.

The sequential/holistic method: the learner's tendency to assimilation and understanding either by using sequential and gradual steps or by going through sudden and large jumps, and it is measured by the degree that the examinee obtains on the items that represent this method in the study tool that was prepared to measure the sequential/holistic method.

Previous Studies

The researcher reviewed some studies, and the following are examples of these studies:

Merniz's (2021) study aims to reveal the preferred learning styles of secondary education students according to the classification of "Kolb" and find out the differences between them according to gender and academic specialization variables, using the descriptive approach. The Kolb Scale of Learning Styles was applied to a sample of (130) students of both sexes in the third year of secondary school in the state of Mostaganem. The following results were obtained: The absorptive learning style is the dominant pattern among the four educational styles according to Kolb's classification among the third-year secondary students, and the synthesis learning style was the least common compared to other learning styles. According to Kolb's model, there were no differences in the four learning styles among the third-year secondary students due to the variable of gender or academic specialization. In light of these results, the study suggests the need for teachers to use various methods that consider the diversity and differences in students' learning styles and prepare rehabilitation and training programs on how to consider the common learning patterns of students.

Abu Auf's (2020) study aimed to identify the trends of achievement goals among students of the professional diploma at the Faculty of

Education at Sohag University and their impact on learning methods according to the Felder-Silverman model. The study sample consisted of (180) male and female students who were chosen randomly. To achieve the study's objectives, the researcher used the descriptive approach with its comparative and correlational methods and the Scale Style Learning of Index (ILS), which was prepared by (Felder & Spurlin, 2005), after its modification. The results showed that the most preferred learning styles among the students of the study sample came in the following order: The sequential/holistic style, followed by the "active/reflective" style, then the "sensory/intuitive" style, and finally, the "visual/verbal" style. The results also showed that there was a statistically significant effect at the significance level ($\alpha \leq 0.01$) for the gender variable in the sensory/intuitive and sequential/comprehensive patterns, in favor of males, and there was no statistically significant effect on the active/reflective and visual/verbal learning styles. There was no statistically significant effect for the specialization variables, and the interaction between the variables of gender and specialization on the performance of the study sample students on the scale of learning styles with its four dimensions.

The Bantwini (2015) study aimed to test the effect of teachers' learning styles on their teaching practices and learning in the classroom in New York. The study sample consisted of (250) male and female teachers in South Africa. The data were collected using the study tool, the questionnaire for teachers of natural sciences in basic schools, and classroom observations during the science class. The study tried to establish if their learning styles affected their teaching in their classrooms. The results in the questionnaire showed that most teachers preferred visual learning styles as better teaching. The analysis of classroom observations revealed their transformation into observational classroom teaching practices. The study found that teachers' learning styles did not affect classroom teaching practices.

The Gokalp (2015) study aimed to identify the impact of students' learning styles on academic performance. The study sample consisted of (140) male and female students from the Faculty of Education at Ayyar 19 University in Damascus, including (68) male and female students from the College of Arts and (72) male

and female students from the Teachers College. The pre-test was used to determine the students' skills. After conducting the statistical analysis process, the study concluded that there are statistically significant differences in the students' pre and post-test scores. The study also revealed a statistically significant relationship between the post-test scores and students' academic success.

The study of Urval et al. (2014) sought to discover the preferred learning styles of the students of the College of Pharmacy in the light of some variables, and to achieve the objectives of the study, the VARK scale of learning styles was applied to a sample of (412) male and female students. The results showed that the most preferred learning styles among the sample members were the composite learning style, and in the last order came the visual learning style. The results also showed no significant differences in the learning styles of the gender variable and the students' academic achievement.

As for the study of Al-Tarawneh and Al-Qudah (2014) aimed to reveal the relationship of resistance to temptation with the prevailing patterns of thinking among Jordanian university students, the study sample consisted of (1701) male and female students from the University of Jordan and Mu'tah University, chosen by the stratified cluster random method. To achieve the study's objectives, the researchers used two scales: the first for resistance to temptation and the other for the thinking styles of Harrison and Bramson. The study results showed a low degree of resistance to temptation among university students. The idealistic thinking style had the highest appreciation, followed by the practical, then the analytical, then the synthetic, and the slightest appreciation was for the realistic style. The results showed that there were statistically significant differences in the degree of resistance to temptation due to the variable of sex, and the differences were in favor of females; the results also showed that there were statistically significant differences in thinking patterns due to gender on the ideal type, and the differences were in favor of males, and in favor of females according to the analytical style, and in favor of the college variable on the synthetic and practical styles, and in favor of students of scientific faculties, the relationship was direct

and statistically significant between thinking styles and resistance to temptation.

Sun, Lin & Yu (2008) pointed out in a study titled " A Study on Learning Effect among Different Learning Styles in a Web-Based Lab of Science for Elementary School students" the fact that fifth-grade students with all their learning styles according to Kolb's model "divergent, asymptotic, representational, adaptive" get better results by learning science in the lab, based on the contrastive learning model, and the two online-based comparisons.

A study conducted by Dumour (2008) entitled "The relationship of learning styles prevalent among university students in the southern Jordan region to academic achievement and self-efficacy" aimed to know the relationship of learning styles prevalent among university students in the Jordan region academic achievement and academic achievement. A total of (975) male and female students participated in the study distributed among the students of the universities of southern Jordan, Mu'tah, Al Hussein, Tafila, and Al Balqa', and of all specializations, the individuals were chosen by stratified random sampling method to represent males and females from all disciplines. The scale of learning styles that he developed, which consisted of (104) paragraphs, was used. He also used the scale (ASE) developed in the Korean language. In 2000, Kim and Park proved their credibility, and descriptive statistical methods (means and deviations) were used. Also, a binary variance 3×2 analysis was used, according to the variables of sex and specialization, and a matrix of Pearson correlation coefficients between different learning styles and academic self-efficacy and students' academic achievement to find the correlation between learning styles, academic achievement, and self-efficacy. The results indicated that the prevailing learning styles among students of the universities of the southern region are the verbal one, then the dependent style, then the competitive, then the participatory, and then the abstract sensory style. The results also indicated the existence of a

statistically significant correlation between the competitive dimension among the study sample as a dimension of learning styles and the difficulty of the task or duty as a dimension of the academic dimensions. In addition, they found a correlational relationship with a statistical significance between the dimensions of cooperative, avoidance, participatory, dependence, and independence among the study sample, with the dimension of academic self-efficacy and the difficulty of the task or assignment.

Method and Procedures

Study Approach

The researcher used the descriptive-analytical method to access information from the study sample by analyzing the questionnaires statistically to obtain and interpret the results, and the descriptive approach is the most suitable for the study, as it aimed to know the common learning styles of students according to the Learning Style Index (ILS) (Litzinger et al., 2005).

The Study Population

The study population consisted of all students of Al-Balqa Applied University in Jordan and registered in the Salt College for Human Sciences at the university headquarters in Salt Governorate and the two branches of the university: Princess Rahma Al-Huson University College.

The Study Sample

The study sample consisted of (690) male and female students who were chosen by the random cluster method, where the sample was chosen from those registered in the disciplines of English, Special Education, Communications and software engineering, and Applied Psychology, with a percentage of (30%) of the study population. Table (1) shows the sample distribution according to the variables studied.

Table 1. Distribution of the sample according to the study variables

Specialization	English	Special Education	Communications and software engineering	Applied Psychology	Total

N	258	158	50		224	690

Study Tool

The Index of Learning Style, which stands for (Lit Zinger et al., 2005) (ILS), was used, and it is a tool consisting of (44) items designed to assess an individual's preferences on four dimensions as indicated by the Felder-Silverman model. Each of the four dimensions is related to eleven items. Therefore, it is mandatory to choose from two alternatives (a) and (b), where each option is related to one of the dimensions of the Felder-Silverman model, and Table (2) shows the patterns and their types and the item numbers indicating them.

Table 2. Classifications of Learning Styles

Learning Style	Items numbers
Active/reflective	41،37،33،29،25،21،17،13،9،5،1
Visual/ verbal	42،38،34،30،26،22،18،14،10،6،2
Sensory/ intuitive	43،39،35،31،27،23،19،15،11،7،3
Sequential/ holistic	44،40،36،32،28،24،20،16،12،8،4

Correction method

If the student's score on the scale is from:

- (1-3) The student has a balance in both scale dimensions.
- (5-7) The student has a moderate preference for one of the scale dimensions, and he will learn more quickly if he is taught in an environment that belongs to this dimension.
- (9-11) The student has a strong preference for one of the scale dimensions, and the student has a problem if he learns in an environment that does not belong to his common learning style.

The Validity of the Tool

The researcher used the (Litzinger et al., 2005), which is characterized by high validity; the research tool was presented to education specialists with Ph.D. holders to express their opinion in some paragraphs, where some minor linguistic modifications were made to the items of the scale while maintaining them as they are. Then the study tool was applied to the students.

The Reliability of the Tool

Cronbach's alpha equation was used to extract the reliability coefficient for this study, and it was at a value of (0.55), which is within the acceptable ratio. Zwanenberg et al. (2000) reported that the value of the accepted reliability coefficient using the Cronbach's alpha equation in the Felder-Silverman scale ranges from 0.41 to 0.65.

Statistical Treatment

The statistical program (SPSS) was used to process the data, as the following were used:

- - Arithmetic averages and percentages in determining the common learning styles of students
- - An Independent T-test for examining the variables of gender and study program.
- One Way Analysis of Variance (ANOVA) to examine the variables of the university branch, academic year, major, and general point average (GPA).
- Cronbach's alpha equation to calculate the reliability coefficient of the questionnaire.

Study Results and Discussion

The study aimed to identify the learning patterns prevailing among the students of Al-Balqa Applied University, and comparisons were made in the learning patterns prevailing among them according to the variables of the university branch, academic program, academic year, specialization, and general point average (GPA). The study was conducted on a sample of (960) male and female students, and the statistical

analysis of the questionnaires was conducted. The results of the study are presented according to the sequence of its questions:

Results related to the first question:
What are the common learning styles of Al-Balqa Applied University students?

To answer the question, the arithmetic averages and standard deviations of the common learning styles for students of Al-Balqa Applied University were used, as shown in Table (3).

Table 3. Arithmetic averages and standard deviations of the learning styles prevalent among students of Al-Balqa Applied University

Learning Style	Mean	STD	Percentage	Rank
Active/reflective	7.01	0.79	%64	First
Visual/ verbal	6.93	0.82	%63	Second
Sensory/ intuitive	6.76	0.82	%61.4	Fourth
Sequential/ holistic	6.81	0.87	%61.9	Third

It is evident from the above Table (3) that the common learning style is the active, reflective style that ranked first with an arithmetic mean (7.01) and a percentage (64%), followed by the visual-verbal style with an arithmetic mean (6.93) and a percentage (63%). Then the comprehensive, sequential pattern with an arithmetic mean (6.81) and a percentage (61.9%), and the intuitive sensory pattern came in the last rank with an arithmetic average (6.76) and a percentage (61.4%). This means that the common learning style among students is the active, reflective style, and then the visual-verbal style. Next, the arithmetic means of options (A) and (B) were extracted, and then the difference between the average responses to the two options was calculated as shown in Table (4).

Table 4. The differences between the average responses to each of the four learning styles

The b-a. difference	Average responses to option (b)	Average responses to option (a)	Learning style
Active/reflective	6.55	4.44	2.11
Visual/ verbal	6.73	4.26	2.47
Sensory/ intuitive	7.12	3.22	3.90
Sequential/ holistic	7.00	3.99	3.01
All	**6.39**	**3.71**	**2.68**

It is clear from Table (4) that the difference in the total arithmetic means of the learning styles is (2.68), and this means that there is a balance between the two sides of the four learning styles. It is also noted that the sensory style, which is concerned with facts and details among students, dominates the intuitive style, which is concerned with discovering relationships and possibilities. The arithmetic means difference was (3.90), and the sequential style, which is concerned with gradual sequential steps among students, over the holistic style, which is concerned with sudden and large jumps, where the mean difference was (3.01). Finally, it is noted that the result of this study showed that the common learning style among the students of Al-Balqa Applied University is the active/reflective style, which ranked first.

Results of the second question: Are there statistically significant differences at the significance level (α≤ 0.05) in learning styles **due to the variables of the university branch, gender, academic program, academic year, specialization, and cumulative average?**

Table 5. One-way analysis of variance (ANOVA) for learning styles by university branch

Learning style	University college branch	Source of Variance	df	Sum of squares of deviations	Mean deviation	Calculated "F"	Sig
Practical/ Reflective	Salt College for Human Sciences/ Princess Rahma College /Al-Huson University College	Within groups	2	0.205	0.103	0.16	0.85
		Outside groups	342	215.32	0.630		
		Total	344	215.52			
Visual/ Verbal		Within groups	2	9. 35	4.67	7.18	0.001
		Outside groups	342	222.67	0.65		
		Total	344	232.02			
Sensory/ Intuitive		Within groups	2	3. 94	1.97	2.95	0.054
		Outside groups	342	228.87	0.66		
		Total	344	232.82			
Serial\ Holistic		Within groups	2	0.47	0.236	0.31	0.734
		Outside groups	342	261.30	0.76		
		Total	344	261.77			
Total		Within groups	2	0.042	0.021	0.099	0.906
		Outside groups	342	73.12	0.214		
		Total	344	73.16			

It is evident from the above Table (5) that there are no statistically significant differences in total attributable to the university branch, as well as no statistically significant differences attributable to the university branch in the practical/reflective learning pattern, the sensory/intuitive pattern, and the sequential/holistic pattern, while there are statistically significant differences attributed to the visual/verbal style and in favor of Princess Rahma College and Al-Huson University College, where the arithmetic mean of the Rahma branch was (7.08) and the Huson branch was (6.94), while the arithmetic mean in Salt College for Human Sciences was (6.71), this means that the visual/verbal learning style is more dominant and common in the Princess Rahma College and Al-Huson University

College, and this may be due to the high level of students in the Salt College for Human Sciences, where the acceptance rates are higher than the rest of the branches, as a result of the high level of competition among the accepted students Therefore, they use other learning styles.

Table 6. T-test results for the significance of the differences in learning styles due to gender

Learning Style	Gender	Mean	Standard deviation	Mean	Standard deviation	Calculated "T"	Sig
Practical/reflective	Males/ Females	7.01	0.75	7.041	0.97	0.22	0.85
Visual/ Verbal		6.96	0.80	6.81	0.90	1.23-	0.25
Sensory/ Intuitive		6.78	0.89	6.65	0.76	1.03-	0.30
Serial\ Holistic		6.86	0.89	6.59	0.71	2.14-	0.03
Total		**6.90**	**0.44**	**6.77**	0.54	**1.92-**	0.10

It is evident from the above Table (6) that there are statistically significant differences in the sequential/holistic learning style that are attributed to the gender of the students and in favor of females, with an average of (6.86) over the males, for whom the mean was (6.59), the reason may be due to the nature of the female biological composition, which is concerned with minute details and sequential thinking. In contrast, males are concerned with comprehensiveness and totality, and there are no statistically significant differences due to the gender variable in the first three dimensions (practical/reflective, visual/verbal, and sensory/intuitive).

Table 7. results of the t-test to indicate the differences in learning styles attributable to the study program

Learning Style	Study Program	Mean	STD	Mean	STD	Calculated "T"	Sig
Practical/reflective		6.98	0.75	7.07	0.83	1.07-	0.28
Visual/ Verbal		6.93	0.81	6.94	0.83	0.04-	0.96
Sensory/ Intuitive		6.80	0.83	6.70	0.84	1.11	0.26
Serial\ Holistic		6.74	0.86	6.90	0.87	1.66-	0.09
Total		**6.86**	0.44	**6.90**	**0.48**	**0.76-**	**0.44**

It is clear from Table (7) that there are no statistically significant differences at the level ($\alpha=0.05$) in the learning styles that are attributed to the study program (Bachelor, Diploma), and the reason may be due to the academic atmosphere and socio-cultural factors to which diploma and bachelor students are exposed to the same degree within the university campus.

Table 8. Results of the ANOVA test for differences in learning styles attributable to the academic year

Source of variance	Academic year	df	Sum of squares of deviations	Mean deviation	Calculated "F"	Sig
Within groups	First	4	0.135	0.045	0.21	0.889
Out of groups	Second	341	73.03	0.214		
Total	Third	345	73.165			
	Fourth					

It is clear from Table (8) that there are no statistically significant differences at the level (α= 0.05) in learning patterns that are attributed to the school year (first, second, third, fourth). Students' exposure to the same university environment and the same social and cultural factors; students are also affected by the teaching methods at the secondary and university levels.

Table (9): Results of the one-way analysis of variance test for differences in learning styles according to the variable of specialization

Source of variance	df	Sum of squares of deviations	Mean deviation	Calculated "F"	Sig
Within groups	4	1.542	0.388	1.831	0.122
Out of groups	341	71.622	0.211		
Total	345	73.165			

It is clear from Table (9) that there are no statistically significant differences at the level (α=0.05) in learning styles attributed to specialization (English, Special education, Communications and software engineering, Applied Psychology), and this may be due to the common teaching style in all disciplines, and that students are affected by the lecturers and their teaching style.

Table 10: Results of the one-way analysis of variance test for differences in learning styles according to the general point average (GPA) variable

Source of variance	df	Sum of squares of deviations	Mean deviation	Calculated "F"	Sig
Within groups					
Out of groups					
Total					

It is clear from Table (10) that there are no statistically significant differences at the level (α=0.05) in the students' learning patterns that are due to the cumulative average. The reason may be exposure to the same educational environment, regardless of the general point average (GPA), as students at different academic levels are affected by the lecturers and their teaching style.

Conclusion

The common learning style in Al Balqa Applied University is the active, reflective style, which ranked first, followed by the visual-verbal style, then the comprehensive, sequential style and the sensory-intuitive style came in the last place. Therefore, the faculty members at Al Balqa Applied University should pay attention to the active, reflective style in the first place through practical procedures as well as reflective thinking processes as well as the visual/verbal style where students tend to deal with pictures, charts, graphs or words, sentences and written texts with verbal directions. The visual/verbal learning style was more common in Princess Rahma College and Al-Huson University College than in Salt College for Human Sciences. Moreover, there are differences in the fourth learning style, sequential/holistic, in favor of females over males, and there are no statistically significant differences at the level ($\alpha = 0.05$) in learning styles attributed to the academic program, academic year, specialization, and general average (GPA).

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