The Cognitive Style (Focusing-Scanning) among Al-Quds University Students

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Abstract

This study aims to explore the cognitive style (focusing - scanning) among Al-Quds University students. A descriptive approach was used to achieve this objective. The study population included the first-term student of Al-Quds University for the academic year (2019/2020). The sample of the research consisted of (262) students who were selected using the Stratified Random Method. The validity and reliability of the study instrument were assessed. The findings showed that there were differences due to the gender in favor of females towards focusing, and to the faculty variable in favor of the faculty of Science towards focusing, the findings also revealed differences attributed to (GPA) in favor of the average (70-80). Importantly, the findings found no differences were attributed to the educational level, and that confirming the need to pay more attention to develop the cognitive styles of focusing for all university students as they affect positively the level of learning and education.

Keywords: **Cognitive Style, Focusing-Scanning, Al-Quds University, Students.**

Introduction

Cognitive styles are essential and important factors influencing the outcomes of the learning process. Identifying a suitable style leads to an improvement in the effectiveness and quality of learning (Joughin, 1992). In this regard, Al-harithi (2010) suggested that the learner may have intellectual capacities that would allow him or her to achieve a high level of achievement. They never attain this level without studying the correct styles and methods required to make use of their capacities. In this sense, they started learning and addressing the cognitive styles that match the differences between learners, (focusing – scanning) style is one of those styles (Entwistle. 2000). Over the last twenty years, there has been a growing interest in educational research that discusses individual differences. Cognitive styles are one of these individual differences. Cognitive styles are defined as "The distinctive method people use to address and process information, feelings, and behavior in learning situations" (Nisbett, & Masuda (2003); Dong, & Lee, (2008)).

Cognitive styles reflect the cognitive preferences of the individual or the individual's preferred forms of performance in perceiving and organizing the surrounding stimulants. It is important to use the cognitive style accurately to achieve contact and the interaction between individuals (Kozhevnikov, 2007). It should be noted that there is evidence that cognitive style preferences shift based on educational training and become more analytical and thought-linked (Knox, 2000; Kolb& Kolb, 2005). Felder and Spurlin (2005) suggested that there are some styles of information processing that are favored by students, while others communicate more with written and verbal interpretations. There are some students whose learning styles are based on focusing, and therefore, they can pay more attention to detail and connect ideas. Goldwater and Schalk (2016) noted that students who use focusing style concentrate on understanding and learning the school materials, including linking the parts of the material content and learning about it from a holistic perspective. Scanning style-based students concentrate on rote learning and seek to recite the content as they learn, without concentrating on understanding and comprehension.

Cognitive style (focusing - scanning) is a method that reflects the individual differences in terms of attention and focusing on the stimulants they encounter. Focusing style-based individuals are characterized by the ability to draw attention to situations and stimuli, moreover, to keep on paying attention, and not to rush to make conclusions and decisions, whereas the scanning style-based individuals are to the contrary (Raheef, 2009)

Fulmer and Barry (2004) proposed that the cognitive styles are relatively stable individual differences between individuals in terms of the methods of organizing perceptions and experiences, as well as informing and handling knowledge. They reflect the most frequent habits of thinking.

Salim (2009) suggested that cognitive style (focusing - scanning) is a method of explaining the differences between individuals regarding the degree of attention and intensity. Focusing style-based individuals are distinguished with their straightforward goals as well as having a high

degree of focusing and attention, whereas scanning style-based individuals are speedy and short-sighted, they also lack the attention in terms of its length.

The problem of the study

The problem of this study is to identify the cognitive styles (focusing - scanning) among Al-Quds University students due to the variables of this study (gender, faculty, educational level, place of residence, and grade point average (GPA)).

Related literature

Relevant literature indicated that there are differences between the means of focusing -based and scanning -based cognitive styles students (Rizk, Hana, Al-Desoky& Wafa 2018). There are also differences between focusing style-based students' scores and scanning style-based students' scores, as well as between the means of focusing style-based students' scores and scanning style-based students' scores in academic achievement in favor of focusing style-based students (Abdel Alim& Raja 2017) and (Shehta, 2017).

Diseth and Martinsen (2003) indicated that the cognitive style (deep and surface) has positive effects on academic achievement. Raheef (2009) and Muhder (2014) showed that there are differences in the cognitive style (focusing - scanning) due to gender variables in favor of males, and there are differences due to faculty variables (Science-Humanities) in favor of the Science Faculty, where focusing style is dominant.

Methodology and procedure

Study approach

The descriptive approach used to achieve the purpose of this study. It is characterized as an approach that explores an existing phenomenon, event, or problem, and can be used to obtain the information needed to answer questions or hypotheses of the research.

Population and Sampling

The population of the current research included first-term students at Al-Quds University the school year (2019/2020). The population of the study involved (9500) female and male students. The Stratified Random Sampling method was used to select the research sample which consisted of (262) students, males comprised (40.8%) of the sample while females represented (59.2%), as it is shown in Table (1).

Table 1: The distribution of the study sample according to the variables of the research.

Variable	Degree	n	%
Gender	Male	107	40.8
	Female	155	59.2
	Scientific	119	45.4

Faculty	Humanities	143	54.6
Educational level	First year	74	28.2
	Second year	85	32.4
	Third year	60	22.9
	Fourth year and beyond	43	16.4
Place of residence	Village	63	24.0
	City	148	56.5
	Camp	51	19.5
GPA	≥ 70	63	24.0
	70-80	66	25.2
	80 ≥	133	50.8

Instrumentation

Based on the literature and their instruments, as well as revising the relevant educational literature, the measurement of cognitive style (focusing – scanning) was used; which was prepared by Aljaburii and Alhassuna (2020). The measurement of this research consisted of (25) statements to assess the cognitive style (focusing – scanning), the total statements ranged from (25-50) scores with a theoretical mean (37.5) and at a virtual level (1.68). The higher the score on this measurement is above the mean, the more it goes towards focusing domain. The lower the score below the mean, the more it goes towards the scanning domain. The response should be one of the two alternatives (A, B); (A) is given two scores and reflects (focusing) style, while (B) gets one score and represents (scanning) style. In this way, the total score of the respondent is calculated. The importance of this procedure in building cognitive tests and measurements was described in Riding's study (1997).

Instrument Validity

Validation of the instrument for all items exceeded (0.65)and ranged between(0.66 - 0.84), which implied that these elements were capable of measuring each element of Cognitive style (focusing - scanning)among the sampled population.

Instrument Reliability

Reliability was tested using Cronbach's Alpha that was (0.76), demonstrating excellent reliability and consistency.

Data Analysis

After assessing the validity and reliability of the instrument of the study and ensuring its validity for statistical analysis, the means and standard deviations were extracted for each paragraph of the measurement, where Cronbach Alpha, t-test, **One Way ANOVA** was used, statistical packages (SPSS).

Results

Below are the findings of this research, "The Level of Cognitive Styles (Focusing- Scanning) among Al-Quds University Students, «the impact of each variable through the responses of the participants on the study instrument, and the obtained statistical analysis of data.

Results concerning the first hypothesis

No statistically significant differences are reported at the significance level ($\alpha \leq 0.05$) in the level of cognitive style (focusing- scanning) among Al-Quds University students due to the gender."

The first hypothesis was tested by measuring the results of (t) test, standard deviations, (p) value, and the means of the participants' responses to the level of cognitive style (focusing- scanning) among Al-Quds University students in terms of gender. The results are shown in Table (2).

Table (2): Results of (t) test, standard deviations, (p) value and the means of the participants' responses on the level of cognitive style (focusing- scanning) among Al-Quds University students due to the gender

Gender	N	Mean	SD	T	p-value
Male	107	1.64	0.14	-4.89	0.00
Female	155	1.74	0.160		

Table (2) indicates that the value of (T) is (-4.89) and the significance level is(0.00), that is, there are differences due to the gender in favor of females with a mean value (1.74), it is a value higher than the value of the theoretical mean which is estimated at (1.68) towards focusing.

Results concerning the second hypothesis

There are no statistically significant differences at the significance level ($\alpha \leq 0.05$) in the level of cognitive style (focusing- scanning) among Al-Quds University students due to the faculty.

The second hypothesis was tested by measuring the results of (T) test and the means of the participants' responses on the level of cognitive style (focusing- scanning) among Al-Quds University students in terms of the faculty. The results are shown in Table (3).

Table (3): Results of (t) test, standard deviations, (p) value, and the means of the participants' responses on the level of cognitive style (focusing- scanning) among Al-Quds University students due to the faculty.

Faculty	N	Mean	SD	T	p-value
Scientific	119	1.72	0.14	1.915	0.007
Literary	143	1.68	0.17		

Table (3) shows that the value of (T)is (1.91) and the significance level is (0.00), that is, there are differences due to the faculty in favor of Scientific Faculty students with a mean value (1.74), it is a value higher than the value of the theoretical mean (1.68) towards focusing.

Results concerning the second hypothesis

No statistically significant differences appear at the significance level ($\alpha \leq 0.05$) in the level of cognitive style (focusing- scanning) among Al-Quds University students due to the educational level.

The third hypothesis was tested by measuring the means of the participants' responses to the level of cognitive style (focusing- scanning) among Al-Quds University students due to the educational level. The results are shown in Table (3).

Table (4): Means and standard deviations of the participants' responses on the level of cognitive style (focusing- scanning) among Al-Quds University students due to the educational level.

Educational level	N	Mean	SD	F	p-value
First year	74	1.70	0.124	1.68	0.171
Second	85	1.68	0.148		
Third year	60	1.74	0.185		
Fourth year and above	43	1.70	0.204		

Table (4) shows that the value of (F)is (1.68) and the significance level is (0.171), it is a value lower than the significance level ($\alpha \leq 0.05$), i.e. there are no differences due to the educational level.

Results concerning the fourth hypothesis

There are no statistically significant differences at the significance level ($\alpha \leq 0.05$) in the level of cognitive style (focusing- scanning) among Al-Quds University students due to the place of residence.

The fourth hypothesis was tested by measuring the means of the participants' responses to the level of cognitive style (focusing- scanning) among Al-Quds University students due to the place of residence. These findings are shown in Table (5).

Table (5): Means of the participants' responses on the level of cognitive style (focusing- scanning) among Al-Quds University students due to the place of residence.

Place of residence	N	Mean	SD	F	p-value
Village	63	1.70	.16	12.84	.00
City	148	1.74	.15		
Camp	51	1.61	.14		

Table (5) shows that the value of (F) is (12.84) and the level of significance is (0.00) which is lower than the significance level ($\alpha \leq 0.05$), that is, there are statistically significant differences due to the place of residence, the differences are for the highest mean (1.7405), i.e. in favor of the residents of the city, the value that is higher than the value of the theoretical mean (1.68) towards focusing.

Results concerning the fifth hypothesis

No statistically significant differences appear at the significance level ($\alpha \leq 0.05$) in the level of cognitive style (focusing- scanning) among Al-Quds University students-due to the (GPA).

The fifth hypothesis was tested by measuring the means of the participants' responses to the level of cognitive style (focusing- scanning) among Al-Quds University students due to (GPA). These findings are shown in Table (6).

Table (6): Means of the participants' responses on the level of cognitive style (focusing- scanning) among Al-Quds University students due to (GPA).

GPA	N	Mean	SD	F	p-value
≥ 70	63	1.627	0.13	15.27	0.00
70-80	66	1.685	0.18		
≤ 80	133	1.754	0.14		

Table (6) shows that the value of (F) is (15.27) and the level of significance is (0.00) which is lower than the significance level ($\alpha \leq 0.05$), that is, there are differences due to (GPA) in favor of the average (70-80) with a mean (1.685), the value that is higher than the value of the theoretical mean (1.68) towards focusing.

Discussion

This study aims to explore the cognitive style (focusing-scanning) among Al-Quds University students according to the variables of the study (gender, faculty, educational level, place of residence, and GPA).

The findings revealed differences in the cognitive style (focusing-scanning) among Al-Quds University students due to the gender variable in favor of females and towards focusing. This result illustrated by several social and cultural factors related to the different socialization of males and females, which affect the thinking mechanism, personality, and roles of each, especially in Eastern societies, where these societies place a great burden on the shoulders of

females as they are kids compared to males, this is reflected in their way of thinking and dealing with different matters and situations. The female is raised to be more oriented and attentive in all different areas of life, including the academic arena, to demonstrate her personality and to prove her success in the tasks assigned to her, since she feels that she is socially monitored in all stages of her life, which makes her more attentive and focused in the last detail, and this result differs with Raheef's study (2009).

The findings also showed differences due to the faculty variable in favor of the Faculty of Science towards focusing. This result is explained through the nature of the school curriculum, the students of the Faculty of science tend to study natural sciences that involve using higher mental processes, which begin by focusing, then analyzing and making logical connections between numbers, equations, and abstract thinking. This contributes to enhancing their focusing, making it a cognitive style that always reflected in all facets of their lives. This result is in line with Hasanien (2007).

Whereas the findings showed that there were no differences attributed to the educational level. This result is explained by the similarities between the different stress (social, economic, political, and psychological) that the Palestinian student encounters. Such stresses meet and make students' motivation for learning external, such as the certificate, fear, and grades. The student sees the learning process as a way to obtain external rewards. This does not lead them to develop their cognitive styles over the different years of study, in addition to the fact that cognitive methods are characterized by relative stability and linked to the conditions of socialization and the various educational institutions that seek to focus more on the traditional and conventional curriculum and courses.

The finding of the fourth hypothesis showed differences in the level of cognitive style (focusing-scanning) among Al-Quds University students due to the place of residence between the camp and the city in favor of the city towards focusing, and between the camp and the village towards focusing. This result is illustrated according to the differences in favor of the city not the camp by several factors, the economic factor is the most important of them as it provides all means for the city's residents to live a decent and comfortable life, which enables them able to focus on different issues and pay attention to details.

Finally, the results showed differences attributed to (GPA) in favor of the average (70-80) towards focusing. This result is explained by the propensity of those with high achievement to improve and develop their intellectual, emotional, and subjective skills as well as their ability to selectively pay attention and focus to obtain high average, compared to those with low achievement. This result is consistent with the studies of Rizk and El-Desouki (2018), Shehta (2017), and Abdel-Alim (2017).

Conclusions

The findings of the current study have confirmed that there is a variation among Al-Quds University students in having a cognitive style (focusing – scanning) correlated with the variation of the study variables. This confirms the need to pay more attention to developing the
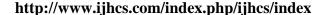
cognitive style of focusing for all university students, confirming the need to pay more attention to develop the cognitive styles of focusing for all university students as they affect positively the level of learning and education.

Recommendations

1. To pay attention to the methods of socialization at home and in the school to build focused and accurate personalities.

2. To implement training programs for Al-Quds University students to develop cognitive styles of focusing.

3. To use teaching methods designed for Al-Quds University students to support the development of the cognitive styles of focusing.

4. To develop measurements to examine the differentiation of cognitive styles (focusing - scanning).

Conflict of interest: The authors declare no conflict of interest.

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