

Article on learning styles according to Biggs theory and its relationship to some demographic variables (Gender and school specialty)

مقال حول أساليب التعلم وفق نظرية بيجز وعلاقتها ببعض المتغيرات الديموغرافية (متغيري
الجنس والتخصص الدراسي) (دراسة ميدانية على تلاميذ المرحلة الثانوية)

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Date de Reçu le:13/05/2018 date de Accepté le: 03/07/2018 Date de publication : 16/01/2018

Abstract The current study sets up to investigate the relationship between learning styles according to Biggs theory of learning and gender and school specialty among Secondary school pupils.

Accordingly, the researchers, in adopting the descriptive method, administered the Biggs test about learning styles on a randomized chosen sample of 400 pupils including boys and girls studying literary and scientific subjects.

The study revealed that there is no correlation between learning styles and the variables of sex and specialty among secondary school pupils.

Keywords: Learning styles according to Biggs theory –Surface method –Deep method

ملخص الدراسة: تهدف الدراسة الحالية بعنوان أساليب التعلم وفق نظرية بيجز وعلاقتها بمتغير الجنس والتخصص لدى تلاميذ مرحلة الثانوية، وللقيام بالدراسة اعتمد المنهج الوصفي، وقد تم اختيار عينة البحث بطريقة عشوائية وبلغت (400) تلميذا وتلميذة، ولقياس متغيرات البحث استعانتم بمقياس بيجز لأساليب التعلم وذلك للإجابة عن الإشكالية التالية: هل توجد علاقة ارتباطية بين أساليب التعلم وفق نظرية بيجز ومتغير الجنس والتخصص الدراسي؟ وبعد المعالجة النظرية والميدانية لمتغيرات الدراسة خلص البحث إلى عدم وجود علاقة ارتباطية بين أساليب التعلم وفق نظرية بيجز ومتغيري الجنس والتخصص الدراسي لدى تلاميذ المرحلة الثانوية.

الكلمات المفتاحية: أساليب التعلم وفق نظرية بيجز: الأسلوب السطحي -الأسلوب العميق

1-Introduction and problematic of the study:

It should be noted that the idea of learning through many methods is not new for some scholars mentioned that learners do acquire cognitive experiences and have a keen desire to learn. In fact, they are much more interested in learning as an end in itself, besides acquiring a deeper understanding of the educational situation than showing interest in the results of the studies while others learn just for obtaining acceptable results that may enable them reach the next level without being interested in the discipline of study. They rather tend to focus on Rote learning

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(learning by heart), lacking to make the slightest effort to grasp information or experience it effectively nor using the methods of scientific thinking when studying an academic subject.

Many researchers have also examined learning styles and their relationship to some variables including the study of Yasser and Kazem (1998) which aimed at identifying the students learning methods in the light of gender and specialty variables at the university of Qaryounis-The scale of Shawk and others was applied to a sample of 131 students who were selected from some literary and scientific colleges. The researchers concluded that there are no statistically significant differences in the students learning styles due to gender factor or specialty.

In the same context, (Marzouk 1990) conducted another study which aim was the identification of the preferred learning methods of students who were outstanding and those who were late in school . The researcher has also identified the differences between the students in different academic disciplines . The sample was constituted of (90) university students .The results revealed no difference in learning methods among students in different disciplines.

Imanwel and Potter have also undertaken a study aimed at examining the differences between students of different disciplines in their preferred learning styles on a sample of 562 students.The results indicated that there were statistically significant differences as far as the students preferred learning styles are concerned.

This what many studies have pointed out including the study of Salgo and Martin (1976) which emphasized the existence of two types or two learning methods used by students during their interaction with the educational situation. They either belong to the deep style, focusing on the relationship between ideas and diving deeply the educational subject or be satisfied with the general and limited facts without going into depth, relying upon rote learning. The successful learner adopts the method that is compatible with the learning material and the goals he aspires to achieve (Lobna Jadid : 2012, p95) .

Based on previous studies, the researchers asked the following questions:

- 1-Is there a relationship between students learning styles according to Biggs theory and their gender?
- 2-Is there a relationship between students learning styles according to Biggs theory and their specialty?

2-Hypotheses:

1-There is a relationship between students learning styles according to Biggs theory and their gender.

2-There is a relationship between students learning styles according to Biggs theory and their specialty.

3-Significance of the study:

The significance of the study may be summarized in the following points:

The discovery of students learning styles helps ,to a large extent, in the distribution of academic disciplines that fit in with their abilities in order to achieve a kind of compatibility between learning situations and students learning methods. Furthermore, this study will help supervisors of the educational process in the selection of ways and styles which are appropriate for students to learn in different specialties. This will contribute to the prediction of their school achievement levels. In addition, learning about learning methods is of a great benefit in guiding students to the school and vocational specialty that corresponds with the pattern of their learning.

This study will also contribute to the achievement of a psychological comfort through the student knowledge and understanding of the methods of learning which help him to understand both himself and others

1-Objectives of the study:

Learning patterns are among the basic concepts in psychology and specifically the field of psychological and educational research. This topic has drawn the attention of many scientists and researchers in this field for it expresses the way the individual acquires and processes information besides it plays a crucial role in the educational process.

The current study aims at identifying the learning styles according to Biggs theory as well as examining the relationship between theses styles and the variables of gender and academic specialty among secondary school students.

2-Theoretical and operational definition of the concept of study:

5-1 Learning styles:

-5-1-1The emergence of learning styles:

The first appearance of the term surface and deep learning was made in 1976 by Sagelo and Martin, Antoistel in 1983 , Shawk 1988 and Biggs in 1978-1999).Each of these scientists has his

own theory by which he tried to explain learning styles (Surface-Deep) .In addition, each scientist has his own tools for measuring learning methods .

Educational literature in the field of learning and teaching points out to several definitions of styles or patterns of learning. There are those who define them as personal methods used by the individual in his interaction with information during the process of learning (Muayad Hamid Jassim Aljumaili, 2013: p22).

Biggs defines them as the preferred ways through which students learn and identify them as Surface learning and Deep learning (Muayad Hamid Jassim Aljumaili, 2013 :p20). Meanwhile, Mahmud Awd Allah defines learning style as the personal method used by the individuals in dealing with information during learning, whether this situation is experimental or in a regular study which can be observed measured and statistically treated.

It is also possible to define learning styles as away the learner perceives different information and experiences which surround him. The individual may use listening or writing styles. He may also have recourse to the teacher or one of his classmates in order to find the relevant solution to the educational situation he faces. He may, in this case, rely upon himself.

It is also possible to define learning styles as the competencies the learner understands about the various knowledge, information or experiences. The individual may use the method of listening or writing. He may also have recourse to the teacher or to one of his classmates in order to find the relevant solution to the educational situation he faces. He may, in this case rely upon himself.

(Ghidoum Ahmed, 2011 :p14).

There is another point of view which states that learning styles are a set of learner-specific performances that are evidence of the way students learn and receive information from the surrounding environment for seeking harmony and adaptation. Another group of researchers define it as the learner preferred method to achieve educational goals. <http://www.moe.gov/Fieles/12-5-2010/33-42-05%2520pm>)

However, in the educational lexicon and psychology ,Nayef Al-Qaisi defined the pattern of learning as the individual usual or preferred learning method such as learning through watching rather than learning by listening .(Nayef Nizar Al Qaisi ,2010,p388) : the American association for training and development has defined the learning pattern as a theoretical and practical concept that points to the way the individual learns or change his behavior (Ibrahim Ravashdeh et al, 2010: pp361,362).

There is another definition which states that learning style is the manner or method by which the individual runs his training. (Ghidoum Ahmed ,2011,p15). Is is also defined as a set of operations and activities practiced by the learner during the educational situation in order to achieve previously identified educational objectives. (Mohamed Al-Sayid Ali, 2011,p74)but the educational lexicon and psychology defined it as aset of methods which aims at assisting the individual in acquiring ,processing ,storing and retrieving information . (Nayef Nizar Al-Qaisi, 2000:p56) .

From the above, we conclude that learning style is a method used by the learner during his interaction with the educational situation so as to acquire various social skills and cognitive experiences that fit his needs on the one hand and his abilities and possibilities on the other hand. Learning style in educational psychology has also been identified as an important factor in determining the individual differences as subjects differ in their ways of learning and receiving cognitive experiences . Each individual tends to use the method that facilitates his learning process.

Various studies have been undertaken on the link between Deep and Superficial styles of learning and high and low educational outcomes (pathological and normal) including the study of Paul Ramadan when he linked the superficial treatment of the educational situation to the quantity without quality while linking the deep treatment of the subject of study both quantitatively and qualitatively . Furthermore, one can mention Salgo studies (1976)which were about the presence of a correlation between deep learning style and high quality results while the superficial approach was associated with unsatisfactory educational outcomes (Lubna Jadid ,2010:p96) .

In the present study, learning style is determined by the score the individual obtains separately in each style from the list of Biggs methods of learning.

-5-1-2 Surface style:

The students who belong to this type of learning consider learning only as a way towards other goals such as the desire to obtain a job and their intention to learn is to comply to the study content requirements by keeping mere information by heart without making the slightest effort. This is for the purpose of taking the exam no more , and they are interested in grasping the meaning of the lesson or school content (larbi Gherib and others:2013,p108).

Learners in this specific type are characterized by recalling some facts on a given topic which are related to questions in this subject. In their studies ,they tend to rely on clear instructions, identified

methods, memorization and logical approach to reach the facts in detail. Individuals who use this style believe that school learning is their way to other ends, the most important of which is to obtain a job and their principal goal is to fulfill the study content requirements through conservation and remembering (Mohamed Abu Hashim and Safinaz Ahmed Kamal :without date, p 08)

5-1-3Deep Style:

Students with this type of learning are more serious than superficial learners. They are interested in the subject of study and are seeking to grasp its meaning. They are looking for the purpose of their study. Their view towards studies is serious for they have an internal motivation towards grasping the real meaning of the study subject. They tend to link theoretical ideas with daily experiences they come across. They have the ability to interpret, analyze, explain, summarize identify and distinguish between key and secondary ideas which are contained in the academic content (Abdel Moneim Ahmed El-Dardir :2004,p161).

The users of this approach are characterized by their ability and desire to search for the meaning ,to use similarities in the description of ideas in an integrated manner, as well as to relate them to new ideas in previous experiences. They tend to use evidence in their learning. They are also characterized by an internal motivation and real grasping of what they have learnt. They have the ability to explain , analyze and summarize. They are interested in the subject of study, its comprehension and understanding, linking theoretical ideas to daily life experiences and having serious concerns about study (Mohamed Abu Hashim and Safinaz Ahmed Kamal : without date,p08)

6-Field work Research methodology:

6-1 Method of study:

The descriptive approach was adopted in the present study as it is most appropriate to achieve the objectives of the latter. It is also suitable for the nature of the subject. It is an appropriate method for describing the relations between research variables and their quantitative expression .The data were collected as they were in reality without making any alteration . The phenomenon was treated as it is in the ground.

6-2 Questionnaire about learning styles according to Biggs and his associates:

Biggs and his colleagues prepared the revised two factor study questionnaire (R-s-PQ-2F). This questionnaire was reviewed and translated by the researcher Abdelmoneim Ahmed El Dardir through a study he conducted in 2002-2003 on a sample of secondary-year students at the faculty of education-Kana university, South valley, Egypt. The sample was constituted of 176 students including boys and girls. (Gharib Al arbi and others, 2010-2013, p107).

The questionnaire is structured to measure two learning styles namely Surface style and Deep style. It consists of 20 items, in average 10 items for each style. The tool of learning style is a type of self- report which asks the subjects about their preferred ways of learning according to a five point performance scale (Never- Rarely- Sometimes- Often – Always) where grades are given respectively (1,2,3,4,5) depending on the respondent's answer and his choice of the appropriate response . In the end, we sum up the grades he obtains in the items concerning the surface style items and the grades corresponding to the items related to deep style and so we obtain the total score of the questionnaire.

6-3 Method of correcting Biggs scale:

The Biggs scale is corrected according to the five-response scale (never-rarely-sometimes-often-always) where grades (1,2,3,4,5) are given respectively depending on the subject's response, and then we collect the grades obtained by the sample's members in the scale as a whole in order to identify the total score.

In the following table, we present the items of both surface style and deep style (Gherib Larbi and others:2013,p107)

Table (01) shows the items that belong to both styles of the Biggs learning scale

Learning styles	Items
Surface style	3,4,7,8,11,12,15,16,19,20
Deep style	1,2,5,6,9,10,13,14,17,18

7-Measuring the psychometric parameters of the learning styles scale for Biggs and his colleagues:

7-1 Measuring Validity : The researchers presented the scores of the scale to a group of lecturers in Psychology and Education. The approval rate reached 90° (Gharib Larbi and others, national research 2010-2013 p108). In the current study, the method of internal consistency was

adopted. Values obtained revealed a high level of validity concerning Surface style (0.73) and (0.689) for Deep style. This indicates that the scale has a high degree of validity which justifies its use in the current study.

7-2 Reliability: The stability of the Biggs scale concerning learning styles was achieved by using the Alpha Crombach method and the Spearman Brown equation. The results showed a high degree of stability since the value of Alpha Crombach reached (0.73) and (0.65) for respectively the Surface and Deep styles .

The same value was reached for the Deep style (0.65) and (0.77) concerning The Surface style when the Spearman Brown method was applied (Gharib Larbi and others 2010, 2013 p110). However, in the current study, the half way technique was adopted and the value was estimated at (0.762)which is a quite high degree of stability.

8-Sample:The sample of the study consists of 400 Pupils who are distributed according to gender, level of instruction and specialty.

Table n° 2 shows the distribution of the sample according to gender

Gender	Frequencies	Percentage
Males	163	40.75°
Females	237	59.25°
Total	400	100°

In the above table, we notice that the number of females exceeds the number of males. The percentage of females is 59.25° and that of the males is 40.75

Table n°03 shows the distribution of the subjects of the sample according to academic specialty.

Academic specialty	Frequencies	Percentage
Scientific	200	50°
Literary	200	50°
Total	400	100°

It is clear to us through the percentages shown in the table above that there is a homogeneity in the proportion of students with a scientific specialty and the proportion of students with a literary specialty where the percentage in each one reached 50°

Table n°4 shows the distribution of the sample members according to the level of study.

Level of study	Frequencies	Percentage
Secondary-first level	100	25°
Secondary-second level	100	25°
Secondary –third level	200	50°
Total	400	100°

The above table shows a homogeneity in the percentage of pupils in the first and second levels as the percentage in each of these two levels is 25° in the third level, the percentage is estimated at 50°

7-Presentation and discussion of the results :

8-1Presentation and discussion of the results concerning the first hypothesis which states that there is a correlation between learning styles and gender

Table n°5 shows the relationship between learning styles and gender

	Sample	Coefficient of correlation	Level of significance
Learning styles	400	0.066	No significant
Gender			

According to the value of correlation mentioned in the table above, which is estimated at (0.066)there is no significant correlation between learning styles and sex variable.

8-1-1 Discussion of the results concerning the first hypothesis:

The previous table (5) shows that there is no correlation between sex variable and students learning styles. This means that the way students learn the subject has no relation to their gender .Male and female students tend to adopt the same learning method. This finding is consistent with the study conducted by the researcher Jadid (2009)which aimed at identifying the differences between students in their choice of their learning patterns (Deep and Superficial)according to gender variable among a sample of (2226) of male and female students who were studying at Damascus University and the Baath Syrian University. The researcher found no relationship between gender and cognitive styles meaning that there are no statistically significant differences between males and females in their preferences for learning styles (Muayad Hamed Jassim Al Jamili : 2013,p 92)

This finding was also supported by the study of Fouad Taha TalaFaha and Imad Abderahim Zaghloul. The aim of this study was to identify the learning patterns prevalent among Motah

University students and the extent of their gender and school specialty differences. The study consisted of (490) students comprising (220) boys and (270)females where (305) and (185) students were respectively undertaking their studies in literature and sciences ,during the semester 2004/2005 .

The results of the study showed no statistically significant differences between males and females in the use of learning patterns (Fouad Taha Talafha and Imad Abderrahmane Zaghloul 2009,p 269).

The same results were obtained by Salim Husseinya (2006) through a study about the attitudes of students towards their prevailing study methods and their relationship to demographic and educational variables .The study was conducted on a sample of students from Alepo and Irbid universities. The result obtained revealed no influence of gender upon learning pattern . (Ghassan Al Zahily: 2012 ,p 364).

This may indicate that there is no strategic learning in the research sample. It is therefore necessary to teach the learners educational strategies in order to improve their outcomes. It also helps those who teach them to choose the teaching strategies that suit their learning styles.

According to previous studies which are available to members of the research group, there is no relationship between gender and learning styles and this may be due to the existence of other intermediate variables in shaping the occurrence of this relationship. Henceforth ,the members of the research team recommend to undertake studies in this field ; as studies have confirmed that gender differences are at the level of each pattern (Surface-Deep) .This is confirmed by the study of Gherib and others2013 .Also familiar with literature on educational research on the subject of learning methods and especially in the axis of the factors affecting these educational methods did not confirm the effect of sex factor, recall the words of Anatostal 1982 when he stressed the curriculum content importance and the educational situation general context, the structure of learning, methods of teaching ,level of learner enthusiasm, speed and quantity of presented information and personality traits (Rabia Jaffor :2014, p 128).In the same context, Maria pointed out that learning methods are the product of both nature (environment) and care.

Furthermore, Michel 1998 noted that learning styles are a set of variables (academic achievement ,learning environment and structure of measuring instruments used to evaluate these strategies ;and the best method is self reports owing to their prevalence.

He neither mention Biggs list, which was adopted in our study nor did he provide us with data to enable us find the relationship between the variables. Michel added another factor, namely age where he confirmed that change in age (change in age stage) and even school age . This change will continue with him even until the stage of aging and that changes for some individuals are fast and even doubling and the absence of this relationship may be due to this situation.

In addition, the sample characteristics and environment have a great impact since the more similar the aspects are to a large extent, the more they will contribute with the same effect in shaping learning styles and therefore the absence of the relationship between the two variables .This will lead us to postulate that the members of the research sample were living in one specific environment and social context . Therefore, it is likely that the respondents are exposed to the same emotional support and degree of interaction and pattern between them that do not change and have the same natural and personal characteristics. (Mourad Ali Aissa Saad: 2006, p77,78).

Contrarily to what these studies have revealed, Marge Philipin et all (1995) have concluded that men and women have different learning styles, and generally, men seemed to have harmony between traditional education and their learning style which was not the case for women.

In addition, Wehemein et all (2007) have revealed that male and female students have significantly different learning styles. Therefore, they suggested that the teacher is responsible for reacting to this diversity of learning styles and develop appropriate learning methods.

This finding was also confirmed by the study of Raghuveer Choudhari et all 2011) who found a significant difference in learning styles preferences of males and females . Accordingly, they suggested that both the teacher and students must be aware of students learning method preferences to upgrade learning. The teachers need to assess and understand how to reach all students by understanding the method of presenting the information in multiple ways. They can help students more effectively, both in and out of the classroom. The student must be aware of preferences to adapt study techniques to best fit each student, even when the information and instruction provided does not match the preferred style.

8-2 Presentation and discussion of the results concerning the second hypothesis that states there is a correlation between learning styles and school specialty:

Table n°6 shows the relationship between learning styles and school specialty.

parameters variables \ Statistical	Variable categories	Faycoefficient	Kramer coefficient	Levelof significance
Learning styles	2	0.331	0.331	No significant
School specialty	2			

The results presented in the above table show that there is no correlation between students learning patterns and their academic specialty. This is illustrated by Fay and Kramer coefficient value which is estimated at (0.331).

8-2-1Discussion of the results about the second hypothesis:

The results confirm that there is no correlation between the students learning styles and their specialty. These results are supported by the study conducted by Mohamed Ben Ali Mashi and Sulaiman Abdul Wahed Youssef (2014). The study sample contained 180 students in their preparatory year at Jazan university in the Kingdom of Saudi Arabia where (86) and (94) of whom were respectively undertaking their studies in literary and scientific subjects. The study revealed the absence of a statistically significant difference in the preference of students learning styles according to school specialty.

The results of the current study are also consistent with those of the study conducted by Asma Kamel (2010) which was about the identification of students differences in learning patterns according to their school specialty. The sample size reached 220 students who were studying at the faculty of education in Suez. The study showed no significant differences between the students of scientific disciplines and those of literary subjects in the style of surface learning and deep learning (Mohamed Ben Ali Mashi and Sulayman Abdel Wahed Yousif:2014,p99)

The same results were obtained by the study of Mohamed Hassanein (1998)which aim is to identify the differences between students of different disciplines for both surface and deep learning styles. The study was conducted on a sample of (300) students including boys and girls at the faculty of Education in Banha.

The results of the study revealed that there are no statistically significant differences between literary and scientific students in both learning styles (Superficial and Deep) (Mohamed Bin Ali Maashi and Sulayman Abdul Wahed Yousif :2014 ,p97,98)

The same results were also obtained from the study of Marzuk Abdel-Hamid Marzouk (1990) which was about the identification of preferred learning methods among outstanding students and those who were late in their studies . Furthermore , the study aimed at identifying the differences between students of different disciplines in their learning patterns .It was concluded from the study that there is no difference between students in different specialties as far as learning styles are concerned (Ghassan Al Zahili:2012. P362).

On the other hand, the results of the actual study are discrepant with the findings of Ramadan Mohamed and Ibrahim Al Sabati (2000) who seeked to identify the differences between university students of scientific subjects and those of literary specialty as far as learning styles are concerned. The sample consisted of (119) students including boys and girls in the faculty of Education at King Faysal University. The results of the study showed that there are statistically significant differences between the two groups of students doing literary and scientific subjects in the use of learning styles (surface and deep).

The same result was reached by the researcher Fatima Freir (1996) who conducted a study in order to identify the possibility of coming across with differences in learning styles among students owing to the difference in school specialty. The sample involved (420)students. The result showed the presence of statistically significant differences between the students in their learning styles. This finding is discrepant with the researcher 's findings in the actual study, which may be attributed to the size of the study sample or to the difference in the population and environment in which it was conducted .It may also be due to the different tools used in the collection of data about the topic.

Similar results were also reached from the study of Bitran M et all (2005) who revealed that graduates tend, according to their personality and learning style, to self-select into different medical specialties. This information may help medical graduates to guide specialty choice process, and medical educators to develop learning experiences that take into consideration the individual differences of their residents.

What is noticed from the presentation of the studies available to the research team, the studies varied from supporting and opposing to the result reached in the current study but the early

learning experiences, especially those that are more specialized contribute significantly to the establishment of learning skills whenever the duration of specialization is greater. (Jafour Rabia 2014:p126. Thus ,students of secondary education as they are in the beginning of their specialization ,the emergence of the relationship between specialty and learning methods has not yet been formed in a clear manner.

Furthermore, the impact of other variables on learning styles mentioned above when discussing the results of the previous hypothesis in semi-equal proportions among the research sample maybe a reason for the relationship not to occur.

7-Conclusion:

To delve in the study of learning strategies as a concept ,its relationship to psychological and educational variables is up to now dominated by a diversity of views among researchers for we find , for example that this concept is still used in different expressions such as cognitive strategies or epistemological and even mental, cognitive competencies ,intellectual competencies. We also encounter methods of ignition.Furthermore , we notice the absence of agreement on lexical definitions for this concept. Some would define it as an art of planning and coordinating a set of processes in order to reach a certain goal . Others view it as a long and complex integrated loop of actions taken to achieve a goal . Certain researchers view it as set of procedures the learner programs according to previous acquisitions to reach a goal within a given situation.

Despite the diversity in the conceptual approach to the concept as well as in the classifications and types of educational strategies in terms of census and designations,this variable is now one of the central variables in the field of cognitive psychology, and this is what the researchers Weinstein and Mayer (1986)pointed out .

As Research moved from the interest to know how the methods of presenting educational material affect the behaviour of the learner to research how the reception, treatment of the educational material and its retention in order to draw benefit from them. Perhaps what Piaget's theory of cognitive growth incorporated concepts such as cognitive structure and the learner self –activities (ignition) and that learning is a change in cognitive structure and not a change in behaviour is the best evidence of the importance of the need to pay attention to the learner in producing learning .

Research continued in this area where specialists have identified a set of educational strategies that are not easy to limit or collect because of the different points of view including Valley's classification (1985)as

he classified it into three groups (Cognitive strategies ,meta cognitive strategies ,socio-emotional strategies).Weinstein and Mayer classification (1986), Thomas and Rohwer classification (1986) and Biggs classification (1986). Perhaps the broadest and most comprehensive classification is Quebec's classification (1996). Research has not stopped at this point but specialists have linked these strategies to other variables such as the type of knowledge (declarative conditional) as well as personal and demographic variables of the learner such as his gender and his specialty .

Accordingly ,our study was to examine the relationship between learning strategies according to Biggs classification and gender and specialty variables where the results of which have concluded that there is no relationship between these variables .These findings have been reached by previous studies in the Arab environment and have already been mentioned in the discussion of the study results.

The difference and similarity in the results in other studies is due to several factors related to the same variable .The diversity in the definition of learning in itself as well as the multiplicity of different classifications of educational strategies and their measurement tools as well as the difference in the employment of strategy from one situation to another for one individual. All these factors and others are what make the results differ from study to study.

Moreover, the absence of a relationship between the educational strategies variable and both gender and specialty maybe due to the non-impact of gender and specialty factors .This means that both sex and specialty cannot cause discrimination in the educational strategies or that the members of the research group do not possess educational strategies .Hence, it is necessary to think of enabling learners in adopting these strategies and that even there is a need to train a teacher on these competencies so as to be presented to the learners (Jacques Tardif (1997).

10-Bibliography:

-Foreign-language References:

- 1-Biggs, J.B (1978). **Individual and group differences in study processes**. **British journal of Educational Psychology** , 48 ,266-279
- 2-Biggs,J.B (1999). **Teaching for quality learning at university**. Buckingham : The open university press.
- 3-Biggs,J,B,Kember,D & Leung , D.Y.P. (2001) **The revised two factor study process questionnaire :R-SPQ-2F**. **British journal of Educational Psychology**.71, 133.149
- 4-Weinstein,C and Mayer, R. (1986)**the teaching of learning strategies** .Wit.rock , M,Ed ,Handbook of Research on teaching ,Macmillan, New York,315-327
- 5- Marge Philipin et al (1995) , **a survey of gender and learning styles** Vol 32, Issue 7-8, pp 485-494.
- 6-Wehmein et al (2007)**adv Physiol Educ Gender differences in learning styles-updated** on October2007 june31-153-7 6,2015Hub pages.com/education 31/05/2018 15h19mn
- 7- Raghuveer Choudhary et all : (2011)7 (2): **Gender differences in learning styles preferences of first year medical students** **Depart of Physiology**, Government college Kota , India

8-Bitrane M et al (2005) - **Influence of personality and learning styles in the choice of medical specialty** Rev med Chil .Oct,133 (10):1191-9. Epub 2005- (Article in Spanish)

9-Jacques Tardif, (1997) **pour un enseignement stratégique** (For a strategic teaching) les éditions logiques ,Paris

-Arabic-language References:

10-Rowachda Ibrahim,Nowafwa Walid El Omri Ali,(2000) **Learning patterns among ninth grade students in Irbid and their impact on their achievement in chemistry**:Jordanian Revue of Educational Sciences,6,4 (In Arabic)

11-Abdelmonim Ahmrd Edrider, (2004) **Contemporary studies in Cognitive Psychology** ,Part 1-World of books for publishing ,distribution and printing ,Cairo-Egypt (In Arabic)

12-Larbi Gherib (2013).**Thinking strategies, learning patterns and cognitive-perceptual style among teachers students at Oran higher school for teacher training** ,National study ,Oran University. (In Arabic

13-Ghassan AlZuhaili, (2012)**Learning strategies for students of open education at the faculty of Education, University of Damascus**, Journal of Damascus University ,Volume (28) n° (01) ,357-391 (In Arabic)

14-Fouad Talafha and Imad Abderrahim Zaghloul, (2009) **Preferred learning patterns among Motta University students and its relationship to gender and specialty** ,Damascus University Revue,25,1,2, Faculty of Educational Sciences,Motta University, (In Arabic)

15-Ghidom Ahmed,(2011) **Learning strategies and their impact on pupils school outcomes**. Phd dissertation in Educational Psychology ,Oran University (In Arabic)

16-Lobna Jadid (2010)**The relationship between learning styles as a pattern of information processing and examination concern and their impact on school achievement**,Faculty of Education,University of Damascus ,Revue of Damascus University ,Vol 26, and appendix ,93-123 (In Arabic)

17-Moayad Hamed Jassim Al Jamili (2013)**Cognitive and Learning styles among Iraqi university students**,PhD dissertation (In Arabic)

18-Mohamed Ben Ali Mochi and Suleyman Abdel Walid Youssef(January 2014)**Predictive value of preferred learning styles according to Reed's model of academic achievements for students in their preparatory year at Jazan university for IQ disparities**.Kingdom of Saudi Arabia,Jazan university revue, section of human sciences ,Volum3 N°1 (In Arabic)

19-Mohamed Abu El Hachemi and Safinaz Ahmed Kamal (year not mentioned)**Distinctive learning and cognitive methods of university students in the light of their achievement levels and their various academic specialties**. Faculty of Education. King Suud. Taiba University (In Arabic)

20-Mohamed Essayed Ali, (2011)**Encyclopedia of Educational terms**, Dar al Mashirah for publishing, distribution and printing, Amman –Jordan (In Arabic)

21-Nayaf NAzar Al Rissi, (2010)**Educational dictionary and Psychology**-Dar Usama for publishing, distribution- Amman-Jordan (In Arabic)