Journal of Education and Practice
ISSN 2222-1735 (Paper) ISSN 2222-288X (Online)
Vol.13, No.16, 2022

The Impact of Self-Questioning Strategy (K.W.L) Learning on the Development of Motivation Towards Learning and the Acquisition of Scientific Concepts in the Basic Tenth Grade Computer Research in the Southern al-Mazar District

Safa' Salem Mohammad Altarawneh
Jordanian Ministry of Education
Email ID: safaa22th@yahoo.com

Abstract
The current study aimed to reveal the impact of self-questioning strategy learning (K.W.L) in the development of motivation towards learning and acquisition of scientific concepts in the basic tenth grade computer research in the Southern al-Mazar District. To achieve the objective of the study, the semi-experimental curriculum was used. The study sample consisted of (81) students who were chosen intentionally from basic tenth grade students, one of which was randomly identified as a control group. (40) students, and the other experimental (41) students studied by the self-questioning strategy (L.W.L), where the teaching material was built according to the self-questioning strategy, and a test was used to gain concepts and measure motivation towards computer learning, their psychometric properties were verified. The study found statistically significant differences at an indicative level ($\alpha \leq 0.05$) Between the averages of the two pilot groups' scores and the control of the dimensional measurement of the conceptual acquisition test and the impulse scale towards computer learning, where the value was reached Calculated (-5.738), indicating an impact of the self-questioning strategy (K.W.L) in the acquisition of scientific concepts in the computer research of basic tenth grade students and the development of their motivation towards computer learning. The study came up with the following recommendations, inviting computer supervisors to focus on teachers' interest in using modern and diverse methods and strategies when evaluating teachers, and holding in-service training workshops for computer educators on a self-questioning strategy (KWL) to be used in the acquisition of scientific concepts and student motivation development, and to conduct a similar study on the impact of learning using the self-questioning strategy (KWL) in correcting alternative perceptions of scientific concepts and developing critical thinking.
Keywords: Self-questioning strategy (K.W.L), acquiring practical concepts, motivating learning.
DOI: 10.7176/JEP/13-16-02
Publication date: June 30th 2022

INTRODUCTION

The progress of peoples in this era is no longer linked to their material wealth and raw materials. As far as scientific progress and knowledge production are concerned, thereby contributing to progress, economic upgrading and national security, Therefore, the various countries are currently keen to advance knowledge by improving the level of learning and education in terms and quality. and provide for raising the level of education by providing material and moral support for the creation of a good, thoughtful and creative citizen; The curriculum is one of the factors that States are keen to raise their quality and improve their quality.

Providing active school learning gives students the opportunity to think for themselves. Thus, it requires the teacher to be an observer and a mentor, so as to ask hypothetical questions and activities that encourage students to think and work, It facilitates their access to knowledge and directs them in the right direction to their sources and how to deal with them and overcome the difficulties they face in reaching the required result, and this can only be achieved if we give students planned freedom and sufficient time. To build their scientific and personal knowledge, when they form that knowledge, they have special expertise. As well as being absorbed, remembered and applied, thereby generating a positive orientation towards the subject. (Centre of Excellence for Mathematics and Science Education, 2007).

Concepts constitute the scientific knowledge building unit and play an important role in organizing expertise, remembering knowledge, monitoring phenomena, linking them to their sources and facilitating access to them. According to Piaget's theory, most basic-level students belong to the sensory phase, which requires the selection of scientific concepts compatible with the student's cognitive level in a variety of experiences (Harasha, 2012)

Scientific concepts are one of the most important aspects of science learning because they are important in organizing expertise, remembering knowledge, following up on perceptions, linking them to their sources and facilitating access to them. Pedagogues emphasize the importance of scientific concepts, as they facilitate students' clear understanding of science. Clarity of concepts and terminology is essential for understanding, assimilation and achieving understanding of scientific communication (2005).

Students' acquisition of concepts is one of the most important objectives the computer research curriculum seeks to achieve. Concepts are one of the levels of knowledge building of science on which the components of the rest of the building are built. Concepts are also one of the products of science through which scientific knowledge can be regulated.

Motivation is one of the most important factors contributing to raising students' achievement in the educational process. It also contributes to achieving the goals required in acquiring knowledge, understanding, skills and learning modern teaching methods. And so many other goals that you're working towards. Students who are highly motivated to learn science have a greater attainment and interest in science than students with low motivation. Who is a burden inside the classroom by causing chaos because of their lack of motivation for computer learning, This is due to either factors within the class such as the role of the teacher in the teaching method, Or the curriculum's relationship to motivation, or class environment that stimulates learning, or family circumstances, or other causes that lose the student or increase his motivation towards learning, Hence the need to talk about the concept of motivation towards learning and its importance at the basic stage. Its impact on the subsequent stages and on the student's career. Many psychologists have been exposed to this topic. Ruslan defended motivation as the situation that arises in an individual situation for internal or external reasons that guide the individual's behaviour to achieve the goal (Ruslan, 2012).

The self-questioning strategy (K.W.L) is an abbreviation of Know What Learn as one of the strategies that regulates students' information to model and explain problems facing learners in absorbing some of the new terminology in the technology and computer world; They lead to greater focus and survival of learning impact, access to students' prior knowledge and are the first step to integrating new concepts into communication and presenting the concept for problem-solving through diverse methods. "What do I know? What do you want to know? What have youlearned? " It is a strategy that helps to stimulate students' knowledge background; Students have the opportunity to set their own learning goals (Chanakan, 2015).

The self-questioning strategy benefits students regardless of the subject they study by exchanging the impression that the title of the lesson left in them and by them.

THE STUDY PROBLEM

Teaching a computer researcher in our schools is almost theoretical or part of it depends on certain traditional methods and methods that do not keep pace with the spirit of the age. and does not possess the scientific precision of its content, and it still uses routine methods that emphasize formal and theoretical aspects. And to preserve and demonstrate instead of thinking, creativity and critical and creative thinking, Thinking outside the box to find new solutions and innovations, so students find it difficult to understand the scientific concepts found in the textbook. In addition to dispersing their thinking and overlapping concepts with each other, which may lead to forgetting them, This prompts students to memorize the deaf without understanding them, which may also affect the student's motivation towards computer learning, and their thinking and treatment of everything that exists without thinking about creativity and finding new features.

The findings of the Regional Report on Education for All in the Arab States for the year 2014 indicate that their education systems continue to have filler and repetitive curricula, based on traditional teaching methods, and their components focus more on facts than on concepts, generalizations and principles (United Nations Organization for Science, Education and Culture, 2014).

STUDY QUESTIONS

1- What has been the impact of self-questioning strategy (K.W.L) learning on the acquisition of scientific concepts in the computer research of basic 10th grade students in the South Mazar Brigade?
2- What has been the impact of self-questioning strategy learning (K.W.L) on the development of motivation towards computer researcher learning among 10th grade students in the South Mazar Brigade?
3- Does the impact of self-questioning strategy (K.W.L) learning differ in the acquisition of scientific concepts in the computer research of basic tenth grade students in the South Shrine Brigade by gender?
4- Does the impact of self-questioning strategy (K.W.L) learning differ in the development of motivation towards computer researcher learning among basic 10th grade students in the South Shrine Brigade by gender?

THE IMPORTANCE OF THE STUDY:

The importance of the present study is as follows:

1- Research results may lead to a strategy that has an impact on teaching, thereby increasing the adequacy of computer research teaching, increasing the effectiveness of the educational process in general, and increasing students' achievement.
2- Teachers and the supervision department may benefit from the results of this study in developing the teaching methods they use with their students.
3- The lack of studies on the use of the self-questioning strategy (K.W.L) in linking learning motivation to

computer research teaching**.**

STUDY TERMS

-STRATEGY(K.W.L): DEFINED (Ellian, 2005) as "a strategy devised by Ogle Donna" in 1996 and consisting of steps so that each letter in English refers to the meaning of: K: What I Know? What do I know? W : Want I What to Know? (What do I want to learn?), L : What I Learned? What did you learn? Procedurally defined by the researcher: It is a strategy based on the student directing a set of questions to himself during the processing of information that makes him more integrated with the information he learns and creates awareness of the thought processes to build relationships between the parts of the subject and his information, experience and beliefs on the one side and the subjects on the other.

-ACQUISITION OF SCIENTIFIC CONCEPTS: It is a process that is a mental picture of the student's actual experience, by excitement, so that the student learns that the written or spoken symbol, which leads the student to realize the equality of meaning between the image and the word, is procedurally known to the degree the student receives on the test scale of scientific concepts used in the present study (Iisara, 2006).

-MOTIVATION IS DEFINED AS: It is an internal situation that drives the student's thoughts and knowledge, knowledge building, awareness and attention and insists on him to continue or continue performing, in order to reach a certain state of knowledge balance, and represents the knowledge building of the student (Qatami and Qatami, 2000). (Ayasara, 2006)

-MOTIVATION FOR LEARNING AS an internal condition in the learner moves Slo Ke and his performance, and works to sustain behavior. It is a desire that encourages him to learn and directs his actions and behaviour towards learning and asking for more. It is procedurally known to the degree that the student gets on the scale of motivation used in the current study.

LIMITS OF STUDY:

The current study was limited to:

HUMAN FRONTIERS: Basic 10th grade students.

TIME LIMITS: During the first semester of the academic year 2020/2021.

SPATIAL BOUNDARIES: Directorate of Education of the Southern Mazar Brigade.

OBJECTIVE LIMITS: Preparation of the course using the K.W.L strategy and dissemination of the results on the motivation scale for computer researcher learning and collective testing to acquire the concepts used in the current study.

THEORETICAL FRAMEWORK AND PREVIOUS STUDIES

SELF-QUESTIONING STRATEGY (COYNE, 2007):

It is a strategy based on instructing the learner a set of questions to himself during the processing of information which makes him more integrated with the information he learns and creates awareness of the thought processes to build relationships between the parts of the subject subject matter and the student's information, experience and beliefs on the one hand and the study subjects on the other.

AIMS OF THE SELF-QUESTIONING STRATEGY (SHAHAB 2000):

This strategy aims to achieve the following:

1. Know the student's previous knowledge of the subject and interest in the study
2. Assists the teacher in shaping learning experiences and assisting students in reaching the scientifically accepted concept.
3. Creates a certain mental orientation in students and creates a guide for them in learning and in processing data and information.
4. Helps to organize and remember students' information and generate new ideas, which makes him think about the steps that help him to solve the problem in its various aspects.
5. Activate the processes beyond the knowledge that students have.
6. Linking past knowledge with new information and analyzing it in depth and organization leading to knowledge acquisition and integration.

STEPS OF THE SELF-QUESTIONING STRATEGY (MARZANS ET AL., 1998):

Students can be trained to use them through the following steps:

A) PREDICTION AND REVITALIZATION OF PAST KNOWLEDGE:

The teacher begins by presenting the subject of the lesson to students and encourages them to raise some questions to stimulate the processes beyond knowledge in order to learn their previous experiences on the subject of the lesson.

-Each student looks at the title of the subject and then pleads:

-on anything that is centred on this subject based on its title.

-Why would I expect that?

B) PREDICTION AND SELF-REFLECTION CALENDAR:

Each student acknowledges the subject and in the course of reading it tests the extent to which his prediction is correct on this subject. If it is true, he continues to predict and think and then asks himself:

-What is the proposed solution to the problem, for example? Or what's the expected end of it?

-If the predictions are not identical or convergent to the subject of the lesson, the student must ask himself:

-Why are my predictions or predictions incorrect?

-How can I make different predictions or forecasts?

C) FINAL CALENDAR:

1. The teacher discusses the student's findings by raising some questIons that help him to address, analyze and evaluate information and determine how to use it in other life situations.
2. The main roles played by the teacher in the self-questioning strategy are as follows:
3. Convince students of the importance of self-questioning and its usefulness in improving reading understanding.
4. To urge students to ask more questions after each reading process.
5. Raising students' awareness of the importance of follow-up and continuing to ask questions.
6. Reasoning in the generation of questions commensurate with the order of reading processes.
7. .Practice meditation and patience to arrive at the formulation of subjective questions.

To draw students' attention to the use of various methods when generating subjective questions such as: practical presentations in classrooms (Khuzdar, 2006).

STAGES OF THE SELF-QUESTIONING STRATEGY (RAJEH, 1996):

The questions asked by the student can be divided into three main stages according to the question's location of the timing of the use of the same learning process as follows:

1.PRE-LEARNING PHASE:

The teacher begins by presenting the subject of the lesson to the pupils and then examines the questions that each pupil will ask himself in order to stimulate the above-knowledge processes.

-What do I do? (With the aim of finding a focal point to activate short-range memory)

-Why would I do that? (for the purpose of finding a goal)

-Why is this important? (for the purpose of finding a reason to do it).

-How does it relate to what I know? (For the purpose of identifying the relationship between new knowledge and past knowledge and linking new knowledge to long-term memory and knowledge of similar situations).

2.LEARNING PHASE:

Pupils practice self-questioning methods to stimulate above-knowledge processes. These questions include:

-What questions do I face in these situations? (to discover uninformed aspects)

-Do I need a certain plan to understand this or learn it? (For the purpose of designing a learning route)

-Is your plan appropriate for achieving the goal?

-Is what you have done so far in line with the Plan and indicating the goal?

3.POST-LEARNING PHASE:

The teacher exercises the pupils' self-questioning methods.

-How do I use this information in different aspects of my life?

-How efficient am I in this process? (to assess progress)

-Need a new effort? (for follow-up)

-Can I solve the problem in another way?

-Is that exactly what I want to get to?

-How can the solution be validated?

TEACHER'S ROLE IN THE SELF-QUESTIONING STRATEGY (IMPORTANT, 2007):

-Provides opportunities for all pupils to make their own statements.

-Review pupils' thought.

-Students are asked to write data in the table to know what they have before.

-Encourage learners to talk about their thoughts.

-Enriched and encouraged the learner's past knowledge.

LEARNER'S ROLE IN THE SELF-QUESTION STRATEGY (IMPORTANT, 2007):

- Linking SAP Knowledge
- Provide timely feedback.
- The student discusses in his findings by raising some questions that help him to address, analyze and evaluate information and determine how to use it in other life situations.

PREVIOUS STUDIES

Conducted a study **(Nandaa & Pratama, 2021)** aimed at exploring the benefits of the KWL strategy of learning to read and understand students in English. Qualitative research was used, where a semi-structured data collection interview was conducted, by interviewing (3) English teachers in Indonesia and asking them questions related to the KWL strategy implementation programme in teaching and learning Texts were analyzed using objective analysis. The analysis process involved coding and presenting data and research concluded that the KWL strategy enhances students' participation and focus on understanding.

Abdul Jawad (2019) conducted a study that identified the impact of the use of the self-questioning strategy on readers' understanding, motivation towards reading, and self-understanding among basic eighth graders. The study sample consisted of 90 female students, and used the following tools: list of readers' understanding skills, test of readers' understanding, measure of readership motivation and measure of self-conception. The results of the study indicated that there were statistically significant differences between the average grades of female students of the control and experimental groups in the remote application of the reading understanding test, the degree on the scale of motivation towards reading, and the measure of self-concept in favour of the experimental group.

Al-Qassim and Al-Qahtani (2019) conducted a study aimed at identifying the effectiveness of teaching science using the strategy of self-questioning in academic achievement and developing meditative thinking skills in a sample of 100 students from the middle first grade in Khamis Mushait governorate in Saudi Arabia. The sample was divided into two equal empirical groups studied in a self-questioning strategy, the other being a female officer examined in the usual manner; A teacher's manual and a student activities pamphlet were prepared in accordance with the self-questioning strategy. An attainment test was prepared in the planned unit and another was prepared for reflection. Results showed statistical differences between the two groups in attainment and development of meditative thinking skills due to the use of the attainment strategy and the development of meditative thinking skills and for students of the pilot group studied using the attainment strategy such as the development of meditative thinking skill.

The aim of the Asaili study (2019) was to explore the impact of the useof Figure Seven and Circular House map strategies in the development of science processes for basic eighth grade students. The study sample consisted of 80 students from the Dhonin Basic/First Boys' School of the Directorate of Education of General Marka Amman. Distributed in three experimental and control groups. The study used the Science Process Test, which is from (30) a multiple selection type paragraph. The results showed an impact of both the Figure Seven map strategy andthe Circular House strategy on the development of basic eighth grade students' science processes.

Sharif and Hamza (2016) also conducted a study aimed at identifying the impact of the self-questioning strategy on attainment and developing the trend among fourth-graders in chemistry, and the sample of the study consisted of 50 Female students from Babylon, Iraq, who were distributed equally to two control and experimental groups, who were given the multiple selection type test and the trend measure. The study found that female students from the pilot group studied using the self-questioning strategy were outweighed by the control group, which was studied using the usual collection test method and on the trend scale of chemistry.

Risnawati & Lismayanti, 2014 conducted a study aimed at identifying the impact of the self-questioning strategy on readers' understanding. A sample of the study consisted of 40 students, distributed to two control and experimental groups in each of them, 20 demanding Indonesia.

Abdullah also conducted (2013) a study aimed at knowing the impact of the use of a self-questioning strategy on academic achievement and motivation towards physics learning among middle first graders. The study was made up of 54 students from a Baghdad school, who were divided equally into two control and experimental Groups. A multi-choice and motivational test for physics learning was developed. The study found differences between the control groups, which were studied in the usual manner, and the experimental group, which was examined in a self-questioning manner in the test of attainment, on the motivation scale and for the experimental group's benefit.

Aram's study (2012) aimed to learn the impact of using a strategy (K.W.L) In the acquisition of scientific concepts and critical thinking skills of the seventh graders of Gaza, and the study sample consisted of (97) Female students divided into two control groups and comprised (49) female students and experimenters (48) A student, a list of critical thinking and a list of scientific concepts and a teacher's guide were used. The study found statistically significant differences between the control and experimental groups in the acquisition of scientific concepts and critical thinking skills for the benefit of the experimental group.

Blaskowski's study (Blaskowski, 2008) aimed to identify the effectiveness of the indicative reading strategy or self-questioning (KWL) in developing a deep understanding of scientific concepts in the subject of science, and the sample of the study consisted of (45) students in the experimental group and (30) students in the control group of fourth graders in Wisconsin, United States of America. A test was used to measure understanding of scientific concepts in science. The results showed the effectiveness of the self-questioning strategy (KWL) in

developing a deep understanding of scientific concepts in science.

WHAT FEATURES OF THE CURRENT STUDY ON PREVIOUS STUDIES

Through the review of previous studies, no study has been observed to examine the impact of a strategy (K.W.L) In the acquisition of concepts and the development of propulsion towards the basic 10th grade computer researcher, and also notes that the study of partition and metastatic, (2019) researched the use of the self-questioning strategy in educational achievement and the development of meditative thinking skills, and the study of Abdul Jawad, (2019) which examined the impact of the use of the self-questioning strategy, on reading understanding, motivation towards reading, self-conception, and study of his and Abdullah, (2013) where I aimed to learn about the impact of using a self-questioning strategy on academic achievement and motivation towards physics learning and approaching study (Aram, 2012) To know the impact of the use of the K.W.L strategy in acquiring scientific concepts and critical thinking skills of Gaza's seventh graders, this study is therefore characterized by the impact of the use of a similar strategy in acquiring scientific concepts, developing readership and developing Diafa towards science learning in the seventh grade in Jordan.

METHODOLOGY AND PROCEDURES

STUDY CURRICULUM: The semi-experimental curriculum for learning impact of the self-questioning strategy (K.W.L) was used to develop motivation towards learning and acquire scientific concepts in the basic tenth grade computer research in the Southern Mazar District.

STUDY PERSONNEL

The study community shall be composed of all the basic tenth grade students for the first semester of the academic year 2020/2021 at the government schools of the Directorate of Education in the Southern Mazar Brigade, which number 1,504 students (according to the statistics of the Planning Department of the Directorate of Education in the Southern Mazar Brigade). The study sample consisted of (81) students chosen in a deliberate manner from basic year 10 students, from Husseiniyah Girls' High School and Husseiniyah Secondary School for Benbin). Students were distributed to (4) people who were distributed indiscriminately into two groups, one of which was randomly identified as a control group of (40) students and the second pilot (41) students .

STUDY TOOLS

THE RESEARCHER PREPARED THE FOLLOWING:

FIRST, EDUCATIONAL MATERIAL IS TWO SECTIONS:

a. The usual method: students in the control Group are taught in the usual way of the module (algorithms and programming) of the basic tenth grade book (computer).
b. Self-questioning strategy (KWL): My researcher analyzed and conceptualized the content of the two units (material characteristics, changes, and cell) of the Basic Tenth Grade Computer Research Book. The number of lessons (8) were taught in (12) classes and educational products were developed. Each study includeed: Title of the lesson, number of classes, expected results, concepts contained therein and educational means required for teaching the Unit and include actions that the teacher and teacher are supposed to undertake, such as asking a set of questions to investigate past knowledge, Then ask the students questions so that the teacher mentions the concept, and the students write what they know about the subject, And what they want to know, what the students learned from the subject, and then the students unload the answers in a special table, and eventually the calendar questions.
c. The researcher distributed the educational material based on the self-questioning strategy (KWL), to an arbitration panel composed of (5) arbitrators from professors.

SECOND: CONCEPTUAL ACQUISITION TEST

An objective test was prepared to assess students' acquisition of concepts. The number of subparagraphs (16) was a paragraph in the computer research for the basic tenth grade. The preparation of the test went through the following stages:

1- Determine the subject of the study taught using the self-questioning strategy.
2- Analysis of the content of lessons from the module (algorithms and programming) in the computer research for the basic tenth grade in the first chapter of 2020/2021 in order to determine the content dimension.
3- Preparation of a list of educational objectives required for the study unit from the Computer Researcher for the 10th grade aimed at measuring students' achievement.
4- Writing instructions in the front of the test so that the student answers them, and they include the number of questions answered by the student; alerting the student to place his data in the designated place, and clarifying the scientific objective of the test, General guidance on how and where to record an answer with illustrative example and setting the time allotted for testing, and not starting the answer until authorized to do so and alerts the student not to leave any question unanswered, and alerts the student to write his name and

his people in the designated place.

5- Test correction method: One score was monitored for each test question, where the test was finalized (16) a multiple selection type paragraph, thus becoming the test's top score (16) degree, and the small test (0) degree.

6- According to a test on a survey sample of 37 students selected at random from within the study community and outside her sample, to determine the test time to ascertain the clarity of the meanings and test instructions, as well as to verify the.

PSYCHOMETRIC CHARACTERISTICS OF THE TEST AND ITS VERTEBRAE AS FOLLOWS:

Discrimination factors and difficulty of test paragraphs: Students' answers were analysed after being divided into two equal groups by their marks, the upper group and the lower group, and then the differentiation factor between paragraphs was extracted, and no paragraph was excluded. Table (1) shows:

TABLE NO. (1): DISCRIMINATION AND DIFFICULTY TRANSACTIONS FOR COLLECTION TEST PARAGRAPHS

Paragraphs	Discrimination coefficient	The difficulty factor	Paragraphs	Discrimination coefficient	The difficulty factor
1	**58.	32.	9	**55.	36.
2	**51.	76.	10	**56.	76.
3	**52.	56.	11	**63.	56.
4	*48.	44.	12	**59.	44.
5	**69.	57.	13	*47.	51.
6	*47.	68.	14	**51.	61.
7	**75.	76.	15	**58.	76.
8	**72.	72.	16	*46.	40.

**SIGNIFICANCE LEVEL(α ≤0.05).

Table 1 shows that the difficulty factors of the test paragraphs ranged from (0.32-0.76) to differentiation factors (0.46-0.75). These differentiation transactions are appropriate according to the Ebel criteria referred to in (Al-Nabhan, 2004), and all paragraphs have been adopted, indicating the appropriateness of the paragraphs for the test.

B. TEST STABILITY

Test Retest The test was applied to the survey sample of 37 students, and the students' scores were monitored, and then the test was reapplied to the same members of the sample again after (14) days of first application and monitoring of students' grades. By calculating the coefficient of association between students' grades between the two levels of application, the coefficient of association calculated in this way (0.88). The indications of stability were also ascertained using internal consistency constant using the alpha kronbach equation, and the coefficient calculated in this way (0.90). This value is good for such a type of test, indicating that the test has an appropriate degree of stability.

THIRD: THE IMPULSE SCALE TOWARDS COMPUTER LEARNING.

The use of the propulsive scale to the computer and the developer was applied by the researcher consisting of (30) paragraphs.

Believe the impulse scale towards computer learning

The veracity of the measure was verified using the veracity of the arbitrators. The scale was distributed to 10 arbitrators from the curriculum, teaching methods, psychology, measurement and evaluation of Jordanian universities. The scale was amended in the light of their proposals and opinions. No paragraph was deleted and with an agreement to retain it more than 80% of the arbitrators, thus remaining a component of 30 paragraphs.

The indicators of the verification of the scale were also verified using the sincerity of the internal construction, by calculating the correlation factor between the individual's score on the paragraph and his or her overall score on the scale on a reconnaissance

sample (n = 37) students. This table shows (2):

Table (2): Genuine Building Factors for impulse Scale Towards Computer Learning.

N	coefficient of relationship	N	coefficient of relationship.	N	coefficient of relationship
1	*331.	11	**610.	21	**519.
2	**454.	12	**462.	22	*300.
3	*361.	13	**628.	23	**429.
4	**456.	14	**348.	24	**471.
5	**455.	15	**346.	25	**516.
6	*343.	16	*441.	26	**388.
7	**455.	17	**423.	27	**523.
8	**546.	18	*344.	28	*301.
9	*377.	19	*705.	29	**403.
10	*662.	20	*599.	30	**430.

****SIGNIFICANCE LEVEL(α ≤0.05).**

Table (2) shows that correlation transactions ranged from 0.300-0.705 and were all statistically significant at the indicator level (α≤0.05).

CONSTANT IMPULSE SCALE TOWARDS COMPUTER LEARNING:

The constant of the scale was verified by its application to a survey sample of 37 students from two divisions for *males and females. Randomly selected from within the study community and outside its sample, and then re-*applied the scale again to the reconnaissance sample with a time difference of 14 days, With the aim of calculating stability stability, the constant factor calculated in this way (0.81) was reached, and the internal consistency constant was also verified using the alpha kronbach equation, where the constant factor calculated in this way (0.86).

STUDY PROCEDURES:

THE RESEARCHER FOLLOWED THE FOLLOWING PROCEDURES:-

FIRST: the researcher prepared a guide for teaching a computer researcher in the two target units using a self-questioning strategy.

SECOND: The course was chosen to be taught using a self-questioning strategy, in a manner consistent with the distribution of the curriculum, in terms of the number and time of classes and activities, while ensuring the equal application of the method. The teaching material for the two classrooms was built according to the self-questioning strategy, and was based on theoretical literature and experienced in its preparation. He was then arbitrated by specialists and modified in the light of their suggestions. The teaching material was prepared as a teacher's guide for this purpose. The teaching material of the unit was prepared in accordance with the following stages:

1- Analysis of the content of the two units, where the objectives of the lessons included, the basic concepts and sub-concepts of each topic and the relationships between them were accounted for.
2- Identify the overall steps of the strategy, prepare an outline of the course of its lessons that includes the basic steps of each class, and write the knowledge material according to these steps, including selected activities.

SECOND: Design of the study tool (concept acquisition test), through which students' progress and acquisition of concepts are measured, and use of the motivation measure towards computer learning.

THIRD: Divide the four divisions of selected schools into two control groups (not exposed to method) and experimental (taught using the self-questioning strategy (KWL) as previously explained in the study sample.

IV: Students of the pilot group were trained in a pre-application pilot course and trained in the steps of this strategy.

FIFTH: The parity of the two groups was ascertained using the independent sampling test (v) on the study sample members of the control and experimental groups in tribal measurement and table (3) shows this.

TABLE (3): INDEPENDENT SAMPLING TEST RESULTS FOR INDICATION OF DIFFERENCES BETWEEN CONTROL AND EXPERIMENTAL GROUPS IN TRIBAL MEASUREMENT ON CONCEPT ACQUISITION TEST AND MOTIVATION SCALE TOWARDS COMPUTER LEARNING.

variable	The group	N	Arithmetic averages	Standard deviations	Free Degree	Value T	Indicator Level
Acquisition of concepts	Experimental	40	4.33	1.95	79	380.-	.708
	Controlled	41	4.49	1.90			
Motivation for Computer Learning	Experimental	40	70.50	14.64		.200	.842
	Controlled	41	69.88	13.28			

statistically significant differences in the level of indication (α≤0.05) between the average scores of members of the two experimental groups and the control of tribal measurement on the conceptual acquisition test and the impulse scale towards computer learning, where the calculated values (V) are = (-.380, .200) respectively, and their indicative level is equal to (.708, .842) respectively.Sixth: Teaching students of the experimental group for a period of one month, starting from 14/10/2020 until 14/11/20120, at a rate of (12) classes.

STATISTICAL TREATMENTS TO ANSWER THE STUDY'S QUESTIONS, THE FOLLOWING STATISTICS WERE USED:

Computational averages and standard deviations:

Test (v) for independent samples-

Pearson's correlation coefficient for calculating return stabilization.

Alpha kronbach equation to calculate internal consistency constant.Results of the study, discussion and recommendations-

The results of the first question and their discussion: What has the impact of self questioning strategy (K.W.L) learning on the acquisition of scientific concepts in the computer research of basic tenth grade students in the South Shrine Brigade? To answer the question, the independent sampling test (t) was used on the study sample members of the control and experimental groups in the dimensional measurement and table (4) shows this :

TABLE(4): INDEPENDENT SAMPLING TEST RESULTS FOR INDICATION OF DIFFERENCES BETWEEN CONTROL AND EXPERIMENTAL GROUPS IN DIMENSIONAL MEASUREMENT ON CONCEPT ACQUISITION TEST.

The variable	The groups	N	Arithmetic averages	Standard deviation	Free Degree	Value T	Indicator Level
Acquisition of concepts	Controlled	40	5.55	2.07	79	5.738-	**000.**
	Experimental	41	8.78	2.91			

The results in table (4) show statistically significant differences in the level of indication (α≤0.05) between the averages of the grades of the members of the experimental and control groups in the dimensional measurement of the conceptual acquisition test, where the calculated value (v) = (-5.738), and its indicative level is equal to (.000), indicating an Impact of the self-questioning strategy (K.W.L).

This result can be attributed because the self-questioning strategy (K.W.L) is one of the strategies beyond knowledge, which helped students to organize their knowledge, set their goals, evaluate their performance, and compare their distance learning with tribal learning, as it was a great desire of students to learn with this strategy. It may also be because the self-questioning strategy (K.W.L) has given students the opportunity to identify and familiarize themselves with the thoughts of the study, organize their previous knowledge and knowledge in their knowledge structure and link it to the new which requires the applicant to recall past experiences, and to develop questions about what they want to learn. And then they answer these questions through scientific texts, as well as searching for unanswered questions in the subject's references In turn, this has made demand an active learner during the strategy's employment, More informative, which has greatly helped them to assimilate and acquire geographical concepts.

This result is consistent with Tok's study (Tok, 2008) which found the effectiveness of the K.W.L strategy in developing educational achievement. It also agrees with the Serponam and Tyrokham study (Siribunnam & Tayraukham, 2009) which showed an impact of using the K.W.L. strategy in educational attainment. It is consistent with the study (Ibrahim, 2011), which showed the effectiveness of using the K.W.L strategy for achievement development. It agrees with a study (Aram, 2012) which showed an impact of using the K.W.L strategy to acquire scientific conceptsamong Gaza's seventh graders.

Results and discussion of the second question: What has the impact of self-questioning strategy learning (K.W.L) on the development of motivation towards computer researcher learning among 10th grade students in the South Mazar Brigade?

To answer the question, the independent sampling test (t) was used on the study sample members of the control and experimental groups in the dimensional measurement and table (5) shows this:

TABLE (5) : INDEPENDENT SAMPLING TEST RESULTS FOR INDICATION OF DIFFERENCES BETWEEN CONTROL AND EXPERIMENTAL SETS IN DIMENSIONAL MEASUREMENT ON THE IMPULSE SCALE TOWARDS COMPUTER LEARNING

The variable	The group	N	Arithmetic averages	Standard deviation	Free Degree	T value	Indicator Level
Motivation for Computer Learning	Controlled	40	71.58	14.58	11.08-	79	000.
	Experimental	41	109.93	16.44			

Table (5) results show statistically significant differences at an indicative level (α≤0.05) Between the averages of the grades of the members of the experimental groups and the control of the dimensional measurement on the

impulse scale towards computer learning where the value was reached (v) Calculated = (-11.080) respectively, and its indicative level is equal to (.000), indicating an effect of the self-questioning strategy (K.W.L) in the development of motivation towards computer research in basic tenth grade students.

1- Results and discussion of the third question: Does the impact of self-questioning strategy (K.W.L) learning differ in the acquisition of scientific concepts in the computer research of basic tenth grade students in the South Shrine Brigade by gender?

To answer the question, the independent sampling test (v) was used to indicate the differences between students' score averages in dimensional measurement on the test for the acquisition of scientific concepts by gender. Table (6) shows this:

TABLE (6): TEST RESULTS FOR INDEPENDENT SAMPLES TO DETERMINE THE DIFFERENCE BETWEEN STUDENTS' SCORE AVERAGES IN DIMENSIONAL MEASUREMENT ON THE TEST OF ACQUISITION OF SCIENTIFIC CONCEPTS DEPENDING ON GENDER.

The variable	The group	N	Arithmetic averages	Standard deviation	Free Degree	T value	Indicator Level
Acquisition of concepts	Male	19	9.16	3.15	39	**767.**	447.
	Famle	22	8.45	2.72			

The results in table (6) show no statistically significant discrepancies at the indicative level (α≤0.05) between students' score averages in dimensional measurement of students' score averages in dimensional measurement on the test for the acquisition of scientific concepts attributable to gender, where the calculated value (v) is = (.767) respectively, and its indicative level is equal to (.4447)?

The reason can be returned because there are no statistically significant differences at the indicative level (α≤0.05) In the acquisition of scientific concepts attributable to gender in students studied using a strategy (K.W.L) refers to the similarity of the qualification and training of teachers and teachers, and that all students, whether male or female, are suited to these methods and methods. The self-questioning strategy does not target a group other than the other, where both sexes have studied under the same conditions and procedures, which has a positive impact on both males and females?

1-Results and discussion of question IV: Does the learning impact of the self-questioning strategy (K.W.L) differ in motivation towards learning a computer researcher in basic tenth grade students in the South Shrine Brigade by gender?

To answer the question, the independent sampling test (v) was used to indicate the differences between students' score averages in the dimensional measurement on the motivation scale towards computer learning depending on the social gender. Table (7) shows this:

TABLE (7): INDEPENDENT SAMPLING TEST RESULTS FOR INDICATION OF DIFFERENCES BETWEEN STUDENTS' SCORE AVERAGES IN DIMENSIONAL MEASUREMENT ON THE SCALE OF MOTIVATION TOWARDS COMPUTER LEARNING BY GENDER.

The variable	Gender	N	Arithmetic averages	Standard deviation	Free Degree	T value	Indicator Level
Motivation for Computer Learning	Male	19	110.95	18.48	39	365.	717.
	Female	22	109.05	14.85			

The results in table (7) show no statistically significant discrepancies at an indicative level (α≤0.05) between students' score averages in dimensional measurement on the scale of motivation towards computer learning attributable to gender, where the calculated value (v) is = (.365) respectively, and its indicative level is equal to (.717).

The reason may be that there are no statistically significant differences at an indicative level (α≤0.05) In the level of motivation for learning attributed to the gender of students studied using the self-questioning strategy (K.W.L) that the level of motivation has evolved in both males at the same level, which explains the effectiveness of both methods in developing motivation development regardless of the learner's gender, and exposes both males and females to the same time and spatial conditions, as well as the similarity of the educational environment in terms of curriculum, preparation and training.

RECOMMENDATIONS

Based on the study's findings, it may be recommended that:

1- Invite computer supervisors to focus on teachers' interest in using modern and diverse methods and strategies when evaluating teachers.
2- In-service training workshops for computer teachers on the self-questioning strategy (KWL) to be used in the acquisition of scientific concepts and the development of students' motivation.
3- To draw the attention of the developers of the two strategic computer curricula to the self-questioning strategy of the curriculum.

4- Conduct a similar study on the impact of learning using the self-questioning strategy (KWL) in correcting alternative perceptions of scientific concepts and developing critical thinking.
5- Conduct a similar study at different stages of study such as secondary school.

REFERENCES

-Abdul Jawad, Iyad (2019). ***The use of a self-questioning strategy has influenced readership and motivation towards reading and self-understanding among basic eighth-grade students***. Zarqa University Journal of Research and Humanitarian Studies, 19 (2).
-Abu Agha, Husam Salah (2009), ***the impact of the self-questioning strategy on the development of chemical solving skills of 11th grade students in Gaza, published master's letter***, Faculty of Education, Islamic University, Gaza.
-Al-Asili, Yahya (2019). The use of Figure Seven and Circular House map strategies has influenced the development of science processes for basic eighth grade students. ***Journal of Educational Sciences Studies, 46 (2): 317-331.***
-Al-Harahshah, Kawthar (2012). ***The impact of the similar strategy on the acquisition of scientific concepts and the level of performance of basic science operations among basic fifth grade students in Jordan***. Damascus University Journal, 28 (2): 411-451.
-Alian, Fahd (2005), Strategy (K.W.L. in teaching reading its concept and procedures, rules, ***Journal of Teachers' Colleges, 5 (1).***
-Al-Qahtani, Huda and Al-Qassim Mohammed (2019). The effectiveness of teaching science using a self-questioning strategy in educational achievement such as developing meditative thinking skills. ***Journal of Educational and Psychological Studies, Sultan Qaboos University, 13 (1): 151-174.***
-Ambo Saidi, Suleiman bin Mohammed Al-Balushi and Al-Araimi, Abdullah and Basma, Abdulaziz (2008). ***"Planning" knowledge organizations concepts and applications,*** T1, Al-Falah Library, Kuwait.
-Aram, Merft Suleiman (2012). ***The impact of the use of the K. W. L strategy on the acquisition of critical thinking concepts and skills in science in female basic seventh graders***. Unpublished Master's Thesis, Islamic University of Gaza, Palestine.
-Ayasara, Ahmed (2006). ***Leadership and motivation in educational management***. Amman: Al Hamid Publishing and Distribution House.
-Gesture, Sajda and Abdullah, Hassan (2013). The effect of using the "self-questioning" strategy in the achievement of study and motivation towards physics learning in middle grade students. ***Journal of the Faculty of Education of the University of Baghdad, 1 (40).***
-Khatibah, Abdullah Mohammed (2005). ***Science education for all***. Amman, Jordan: Al-Masirah Publishing, Distribution and Printing House.
-Khazandar, Naila (2006). ***Development of Thinking***, 1, Horizons for Dissemination and Distribution, Gaza, Palestine.
-Khaznadar, Naila and Others (2006): ***Development of Thinking, 1, Horizon for Publication, Distribution,*** Gaza Palestine.
-Marzanwa and Others (1998***): Learning Dimensions*** - Teacher's Guide, Translation by Jaber Abdel Hamid, Cairo: Dar Quba.
-Noffel, Mohammed Bakr (2007): ***Multiple Intelligence in Classroom Theory and Practice, Amman:*** Al Masir Publishing and Distribution House.
-Rajeh, Ahmed Ezzat (1996): ***Psychology T10,*** Egyptian Library, Egypt.
-Ruslan, Mahmoud Yusuf (2012). ***Motivation of achievemen***t. Saudi Arabia, Al-Ahsa Governorate: King Faisal University.
-Sherif, Ghada and Hamza, Nasreen (2016). ***Impact of the self-questioning strategy on attainment and trend development among fourth-graders in chemistry***. Iraq, Humanitarian Science, 23 (1): 456-498.
-Shihab, Mona Abdul Saboor (2000), impact of Post-Knowledge Strategies on Science Acquisition and Development of Innovative Thinking Skills of Pupils of the 3rd Preparatory School***, Journal of Scientific Education, vol. 3, No. 3.***
-United Nations Science, Education and Culture Organization (2014). ***Report of the organization for 2013/14***, at http ://unesdoc. Unesco. Org
-Yusuf and Qatami, Naifeh (2000). ***The psychology of classroom learning***. Oman: Al-Shorouk Publishing and Distribution House.
-Blaskowski, C. (2008). Instructional reading strategy KWLH***. Journal of Educational Computing Research, 40(4): 377-404.***
-Chanakan, P.(2015). ***The Effect of Using Know-Want-Learn Strategy on Students 'Achievement and Attitude in Learning Mathematics of 10th Grade Students. Mathematics Education Program, International College, SuanSunandhaRajabnat University***, U-Thong nok Rd., Dusit .

-Coyne Michael d & others (2007),***effective teaching stratigy that accommodate diverse learners ,new jersey*** ,columbus,ohio.

-Center of Excellence for Mathematics and Science Education.(2007). ***The Learning cycle model Physical Science*** Activities Manual, University of Martin: p1-3.

-Risnawati, R. &Lismayanti, D.(2014). The Effectof Using KWL (Know, Want, Learned) Strategy on EFL Students' Reading Comprehension Achievement. ***International Journal of Humanities and Social Science, 4:7(1): 225-233.***

-Siribunnam, R. &Tayraukham, S. (2009). Effects of 7-E, K.W.L and Conventional Instruction on Analytical Thinking, Learning Achievement and Attitudes toward Chemistry Learning***, Journal of Social Science, 4(5): 279- 282.***

-Tok, S.(2008). The effects of note-taking and KWL strategy on attitude and academic achievement***.Journal of Literacy Research, 34: 244-253***.

-Perez, K. (2008).More ***Than 100 Brain- Friendly Tools and Literacy Instruction,*** without edition, California, Corwin Press.

-Nandaa, D.W. &Pratama, D. (2021). Exploring The Application of KWL Strategy Towards Students' Reading Comprehension: Teachers' Perceptions. ***Journal of English Language Studies, 6(2): 185-194***.