

## **The Effect of using (Swom ) model in the Achievement and Life Skills Development for First grade Students In Biology**

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### **Abstract:**

The study aims at identify the effect of ( Swom ) model on the achievement and life skills development of first grade student on. Two section are randomly selected from the first grade, the first section represented the experimental group which is taught according to (Swom ) model ,the second is the control group which is taught according to the traditional method. the number of students in each group is (38 ), so the sample of study is (76) .The study groups are equalized according to the following variables (age in month, life skills test, degree of biology. To achieve the aim of study, life skills test has been constructed of multiple choice items , which consists of (35) items, validity and reliability are achieved. Data were treated statistically using (t-Test) of two independent samples, Person correlation coefficient, Cronbach–Alpha equation ,Sperman-Brow equation and Chi-square. The findings of the study show that there are statistically significant differences between the mean score of the two study group on the life skills post test infavor the experimental group.In the light of the finding ,the researcher recommendes using (Swom) model in teaching biology.The researcher also suggests certin studies that are relevant the present work.

*Key words: swom model, Achievement, Life Skills*

### **Chapter I**

#### ***First: The Problem of the Study***

The recent trends in curriculum planning emphasize the need to provide the required education skills for life, work and education, as confirmed by many studies that have been concerned with the acquisition of life skills, and pointed to their importance and the need to develop students, and make it one of the basic skills that must To be acquired by the learner during the stages of education in order to meet his basic needs and help him to adapt to the variables of the age in which he lives and interact with life situations (Bahaa El-Din, 2000: 134) (Sharkawi, 2005: 2). Many th skills The skills needed by the individual in his daily life, especially those related to scientific skills such as: the skill of personal care of the body, the skill of caring for healthy food, the skill of preventing diseases, the skill of using environmental resources and rationalizing consumption, the skill of using tools and household appliances (Qeshta, 51: 2008). A number of studies were conducted aimed at developing life skills through different methods, strategies and teaching models, such as: Saima (2010), Ibrahim (2006), and Abu Hajar (2006). Students to brilliant success in their lives the operation . In light of the above, the researcher believes that we need to use strategies and educational models, including the model (Swom) in order to be able to raise a

generation with life skills capable of adapting to life and exercise the necessary thinking skills, especially since the curriculum in Iraq still lacks the adoption of a decision skills Life is taught independently in the stages of general education and the inclusion of some of them in some courses, which caused a shortage in the development of life skills of students, in addition to the teaching methods used do not work to develop those skills properly on the one hand and do not provoke thinking in For students on the other. For this reason, the researcher surveyed the views of some supervisors and teachers of biology about the life skills included in the book of biology for the first grade of middle school. It was found that there is a significant deficiency in the inclusion of a number of life skills, especially in the field of manual skills and problem-solving and decision-making skills. This is compounded by the importance of the study to the importance of secondary school students, which is one of the most important stages in the age at which skills begin to be refined. Due to the scarcity of studies, according to the researcher 's knowledge, which linked the model of SOM and life skills, the researcher decided to experiment with teaching according to the model of SOM (Swom) and to identify its impact on the development of life skills of first grade middle school students.

Second: the importance of the study: The education of thinking and skills is an urgent necessity imposed by the current era, to face the challenges of globalization in various aspects of the life of societies, and that the world is witnessing rapid changes in science, knowledge and information flow, made the individual possession of different thinking skills, development and education is a necessity One of the priorities of educational policy tasks is not only in developed societies, but also in all societies (Alawi et al., 2008: 3). This necessitated an urgent need to move education from the memorization stage that relies on memorization and information recall to the development of thinking skills. To enable individuals to be able to cope with this development and its future variables and situations that require understanding, interpretation and analysis to reach sound conclusions about them, in addition to enabling students to think methods, processes and patterns according to the levels of maturity of students, the requirements of knowledge selected, and according to the characteristics of communities. 2001: 15). In this regard, the educational conferences stressed the importance of developing the thinking skills of students as a fundamental goal of all curricula, including the Second Conference of Ministers of Education in the Arab World in 2000, which stressed in the final report on the need to acquire patterns of thinking, especially scientific and critical thinking (UNICEF, 2000). The curriculum should include skills, values and attitudes that develop different types of thinking. (UNICEF, 2004). The teaching of thinking skills has become a prominent place in the thinking of educators and curriculum makers because they are convinced of its importance, especially as students need to provide them with thinking skills to associate with their success (196).

Teaching thinking has taken two paths: teaching as an independent program, or teaching by incorporating thinking skills into the curriculum by rebuilding modules that include thinking skills, and if possible, there is a possibility of merging between the courses. (Diab, 2005: 443) The Swom model is one of the models that focused on integrating critical and creative thinking skills into the content of the study because of its practical solutions to the current

problems of education, not only that, but the strategies used in the model seek to form a new mind capable (Aseery@emirates.net.ae), the model aims to prepare a generation of educated, productive, and lifelong learners by integrating a range of skills in teaching different subjects in accordance with clear, practical strategies, techniques and procedures ([www.idrac.org](http://www.idrac.org))) Especially in science which is prepared Compromise for the development of various skills due to the nature of its construction, content and method of processing topics Add to that nature associated with extrapolation and inference and knowledge of Muslim and evaluate the arguments and the requirements of previous information and ways to link them to reach the right solution. (Abu Hajar, 2006: 98) The interest in the development of life skills through the curriculum and for all levels of education in order to prepare the individual educationally for life in the community, and provide them with skills associated with the environment in which they live and related knowledge, trends and values acquired by the learner intentionally and systematically and practice a range of activities Educational and practical applications, to achieve an integrated building of his personality in which he can take responsibility and deal with the requirements of life successfully (Ghazi, 2002: 211). Hence the importance of acquiring life skills in that they:

- 1 - help to build the learner's social and psychological abilities, including the support provided during the different situations that go through.
- 2 - qualifies learners to take responsibility and self-confidence and the ability to solve problems through dealing with different life situations.
- 3 - gain an individual tendency to science and depth in the study through closer link between the learner and the school and facilitate him to make plans for his life, and the interpretation of many natural phenomena.
- 4 - make the individual able to manage the health interaction between him and others, and between him and the environment and society. (Qeshta, 2008: 47-48)

**Third:** Objective of the study: To identify the effect of using the model (Swom) in the development of life skills for students of the first intermediate grade in biology.

**Fourth:** Study hypothesis: There are no statistically significant differences between the average scores of the experimental group students and the average scores of the control group students in the post-life skills test.

**Fifth:** the limits of the study: The study was limited to the following limits: 1 - a sample of students of the first grade intermediate / secondary secured for girls in the district of Baquba.

- 2 - The second semester of the academic year 2012 - 2013.
- 3 - The last three semesters of the first grade textbook, second edition, the year 2010.
4. Life skills included in the study: skills (health and safety, environmental, manual, problem-solving, decision-making).

**Sixth: Study Terms**

Model: It is the strategy used by the teacher in the educational situation in order to achieve educational outcomes for students based on assumptions upon which the model determines the role of teacher and student and the method of evaluation. (Peregrine and Peregrine, 1998: 46)

He defined it (Zaghloul, 2002) as: An integrated plan and format that includes the design and implementation of specific content and guiding the learning process in the classroom and evaluation. (Zaghloul, 2002: 319)

Swom Model: An educational system and a practical developmental program that includes all aspects of the successful human learner's industry. Aseery@emirates.net.ae (Al-Hashimi and Al-Dulaimi, 2008) defined that: One of the recent trends in the teaching of supra-cognitive skills is to improve learning to prepare a generation that thinks in a holistic way instead of receiving information and not interacting with it. And questions organized by the teacher when teaching creative thinking skills and critical. (Hashemi and Dulaimi: 2008: 141)

The researcher defines him procedurally as: A set of regular procedures necessary to prepare specific teaching objectives and achieve them in accordance with the integration of some thinking skills in the content of the study to demonstrate its impact on the development of some life skills in biology for the first grade intermediate.

Life Skills: These are the mental, emotional and sensory abilities that enable an individual to solve the problems that face his daily life and include the skills related to science (nutritional skills, health skills, preventive skills, manual skills and environmental skills (Lulu, 2005: 61). He defined it (Bastian & Venta, 2005) as: a group of actions and activities carried out by an individual in daily life, including his interaction with objects, equipment and people accurately and skill (Bastian & Venta, 2005, p.15)

4. The researcher defines them procedurally as the ability of the student to deal positively with her personal or social life problems and includes skills (health and safety, environmental, manual, problem solving, decision-making) and is measured to the degree obtained by the student specially designed test.

**Chapter Two: The First Axis: Theoretical Background**

The SWOM model, called the All-Inclusive School Model, which is built on the philosophy of the US National Center and in collaboration with the Idrak Center in Abu Dhabi, consists of a set of comparative thinking skills, questioning, brainstorming, forecasting, problem solving and decision making that are taught by incorporating skill into the course content. The name Swom is based on the first letter of the first word of the model name in English (aseery@emirates.net.ae) school wide optimum model

**Principles of the model:** 1 - Reflection and meditation corner and basis for learning.

2. The basic structure of the model is to integrate the productive mental habits and cognitive skills clearly and specifically in the teaching of teaching materials.

3 - Taking into account the mental model of the learner such as patterns of thinking, preferred learning styles, types of intelligence, tendencies and interests, is an essential element for successful learning.

4. Learning is a lifelong process that is effective and effective in the mind if appropriate strategies are used.

5. Attention to emotions, attitudes and internal perceptions of the learner is half of the learning process, and action, application and performance are half of the other learning process (Al-Hashimi and Dulaimi, 2008: 141-143).

Definition of the skills involved in the model:

**Questioning ::** Find new information by creating and raising questions. (Jarwan, 2000: 45)

**Comparing skill:** identifying similarities and differences between information used as a deliberate process to facilitate the handling of a set of data or problems to reach solutions as a result of similarity or difference. (Debono, 21: 1998)

**Decision Making:** It is intended to differentiate between alternative solutions to face a problem and then obtain the correct information and data. (Mustafa, 2002: 68)

**Predicting:** A mental process that includes the ability of a student to use his or her previous information or observation to predict the occurrence of a phenomenon in the future, ie estimating the future direction or inclination of events based on past experience. (Zeitoun, 1999: 104)

**Problem Solving:** Is the skill of the individual in identifying the problem and generate effective solutions, and implementation requires him to be disciplined, structured thinking and diligent to address problems, and has the desire to face problems rather than avoid them. (BarOn, 1997, p: 17-18) **Generate Probabilitie:** The ability to be creative by discovering or generating other ways to prepare and organize available information and generate new solutions. (Abu Jada and Nawfal, 2007: 470)

### *Life Skill*

Life skills contribute effectively to the acquisition of a group of basic skills that enable them to adapt to the difficulties of the surrounding environment and enhance the positives to ensure the ability to make decisions and solve problems, and that the success of the individual in his life depends largely on the extent of possessing life skills and experiences that help them to face life situations In addition, life skills gain students direct experience through direct

interaction with people and phenomena and give learning a meaning, and provide excitement and suspense to their association. (Abu Hajar, 2003: 37). Reality. (Obeid, 2008: 13)

### *Classification of life skills*

- Classification (Saad Eddin, 2004) classified into the skills: communication and mathematical operations and self-fulfillment and social awareness and consumer awareness and scientific awareness and skills for job readiness. (Saad Eddin, 2007: 58)

Classification (Teacher Training Manual, 2004) classified into skills: self-awareness, empathy, decision-making, problem solving, communication and communication, interpersonal relationship, creative creative thinking, critical thinking, dealing with emotions, coping with stress. (UNICEF, 2004: 6)

- Classification (Lulu, 2005) life skills into skills: food, health, preventive, environmental and manual.  
(Lulu, 2005: 10)

Classification (UNICEF, 2005) included skills for: interpersonal communication, negotiation and rejection, understanding and empathy for others, collaboration and teamwork, advocacy, decision-making and critical thinking, including: decision-making and problem-solving skills, critical thinking skills, Interpersonal and self-management skills include: skills to increase internal control, emotion management skills, stress management skills. (UNICEF, 2005: b)  
Definition of life skills related to study:

### *First: Health and Safety Skills Include*

1 - Nutritional skills: skills that require development of the individual in order to acquire a healthy and proper nutritional pattern and behavior reflected positively on its concepts and trends and enable him to make the decision to choose a food commensurate with the circumstances of his life. (Abu Hajar, 2006: 92)

2. Preventive Health Skills: It is the sum of skills related to the ability to maintain personal hygiene and acquire healthy health habits. (Sharifi, 2000: 144)

**Second:** Environmental Skills: A set of skills necessary for the individual to deal with the environment with its various data that qualify it for successful interaction for its benefit and for the benefit of society. (Mazen, 28: 2002)

**Third:** the skill of decision-making: the skill of learners to deal positively with the problems facing them and enable them to make a constructive and appropriate decision in creative ways and scientific foundations. (Abu Hajar, 2006: 77)

**Fourth:** problem solving skill: It is the ability of the individual to make decision and choose between the best solutions and attitudes and come up with the best output through the problems that go through. (Iraz, 2008: 229)

**Fifth: manual skill:** the ability of the learner to use practical devices, tools and chemicals and draw shapes and perform movements quickly and accurately and synergistically taking into account safety precautions and avoid damage and dangers. (Al-Qasim and Hasan, PT: 19)

**Axis II: Previous Studies:** 1 - Previous studies related to the development of thinking skills:  
- Study (Qutait, 2007) The study aimed to identify the impact of the integration of thinking skills in content in the acquisition of physical concepts and scientific trends among students of the basic stage in Jordan.

The study sample consisted of students of Abu Bakr Secondary School for Boys of Amman

**Third Directorate:** Four types of thinking skills were used: induction skill, deduction skill, decision-making skill and comparative skill. The researcher prepared a test of the physical concepts and a measure of scientific trends, the alpha-Cronbach equation and the analysis of the variance was used (ANCOVA) and analyzed the results using the SPSS program. Content integrated in thinking skills, for the benefit of students who studied according to the content integrated in thinking skills. (Cateit, 2007: 143-161)

Study (al-Marsoumi, 2011) The study aimed to identify the impact of the strategy of Swom (Som) in the collection of literature and texts among the fifth grade literary students, the study population consisted of the fifth grade literary students in Baghdad province, the sample of the study consisted of (72) students, (37) A student in the experimental group and (35) students in the control group, prepared an achievement test applied at the end of the experiment, the statistical methods were used: t-test), K-Square, Pearson correlation coefficient, Spearman-Brown equation. Statistical significance in the achievement test for the benefit of the experimental group. (Ordinance, 2011: g)

### ***Previous Studies Related To Life Skills***

- (Lulu Study, 2005) The study aimed to analyze life skills in the content of the science curriculum for the first and second grades. The results of the analysis of the science curriculum for the first grade showed the inclusion of practical skills, manual and health skills, while nutritional, preventive and environmental skills were not addressed properly. The results of the analysis of the content of the science curriculum for the second grade of the basic focus on the content of environmental skills and manual skills and health, while food and preventive skills were not addressed appropriately and constructively. (Lulu, 2005: 2)

- The study (Capricorn, 2012) The study aimed to identify the impact of employing some active learning strategies in teaching science on the development of life skills among fourth grade students in Gaza governorate. T-test for two independent samples, the Mann-Whitney test, and the ETA square coefficient. The results showed that there were statistically significant differences between the mean scores of the experimental and control groups in the life skills test in favor of the experimental group as well as the presence of statistically significant differences between the high scores of the high achievement in the experimental and control groups for the experimental group and the low achievement in the experimental and control groups for the experimental group. (Capricorn, 2012: d)

### Chapter Three: Study Procedures

**First:** Research Methodology and Experimental Design: The researcher followed the experimental approach and adopted the experimental design of the randomized control and experimental group with post-test to suit the conditions of the experiment and the available possibilities.

**Second:** Society and sample of study: The original community of study includes the first grade middle school students in middle and secondary schools within the day schools for girls within the district of Baquba for the academic year 2012-2013. The school administration also cooperated with the researcher. The sample was divided into an experimental group and a control group, each consisting of (38) students, after ensuring that the students of the two groups are equal in a number of variables as shown in the following tables:

**Table 1:** The T value of the chronological age in months for the students of my group

| Judgment      | Significance level | T value      |              | standard deviation | Arithmetic mean | number    | the group    |
|---------------|--------------------|--------------|--------------|--------------------|-----------------|-----------|--------------|
|               |                    | Tabular      | Calculated   |                    |                 |           |              |
| Is a function | <b>0.05</b>        | <b>2.000</b> | <b>1.540</b> | <b>12.065</b>      | <b>175.078</b>  | <b>38</b> | Experimental |
|               |                    |              |              | <b>11.161</b>      | <b>179.184</b>  | <b>38</b> | Control      |

### *Tribal Life Skills Test*

**Table 2:** T value of the pre - life skills test for students of both study groups

| Judgment | Significance level | T value |            | standard deviation | Arithmetic mean | number | the group |
|----------|--------------------|---------|------------|--------------------|-----------------|--------|-----------|
|          |                    | Tabular | Calculated |                    |                 |        |           |
|          |                    |         |            |                    |                 |        |           |

|               |      |       |       |       |        |    |              |
|---------------|------|-------|-------|-------|--------|----|--------------|
| Is a function | 0.05 | 2.000 | 0.418 | 5.967 | 21.473 | 38 | Experimental |
|               |      |       |       | 4.969 | 20.947 | 38 | Control      |

### *Biology Degree in the First Semester*

**Table 3:** T value of the variable degree of biology in the first semester for the students of the two study groups

| Judgment      | Significance level | T value |            | standard deviation | Arithmetic mean | number | the group    |
|---------------|--------------------|---------|------------|--------------------|-----------------|--------|--------------|
|               |                    | Tabular | Calculated |                    |                 |        |              |
| Is a function | 0.05               | 2.000   | 0.053      | 14.969             | 66.394          | 38     | Experimental |
|               |                    |         |            | 15.505             | 66.578          | 38     | Control      |

**Third:** Study Requirements: 1- Determination of the scientific material: The scientific material is specified in the last three chapters (Chapter VI / how parts of living organisms work, Chapter VII / components of the environment, Chapter VIII / First Aid) of the Principles of Biology for the first grade of the second edition of the year 2010 In the Republic of Iraq.

2- Formulation of behavioral purposes: The behavioral purposes included in the content of the three chapters were numbered (184) behavioral objectives distributed according to the first four levels of the classification (Bloom) for educational objectives (remember - absorption - application - analysis) and to ensure the validity of these purposes and sound formulation, Presented to a number of experts and specialists and made some minor adjustments in the light of their views and proposals to adopt an agreement rate (80%) and above.

3- Preparation of teaching plans: The daily teaching plans were prepared for each of the experimental group according to the SWOM model which included the skills of (questioning, comparing, generating ideas, forecasting, problem solving, decision making). On a number of experts and specialists to express their views and observations, and in the light of some adjustments were made to take their final form.

**Fourth:** Study Tool: A life skills test was prepared after analyzing the content of the last three chapters of the biology book for the first intermediate grade and preparing a list of the basic and sub skills included in it. The initial image of the list included: food skills (16) sub-skills, health and preventive skills (30) sub-skills, environmental skills (22) sub-skills, manual skills (14) sub-skills, problem-solving skill (10) Decision-making skill (10) sub-skill, and the list was presented in its initial form to a group of experienced and specialized in the field of teaching biology in order to give an opinion on the link between life skills and biology and its sub-fields to its core areas and the possibility of deletion, addition and

integration. This step resulted in the deletion and amendment of the drafting of some of them and the integration of (nutritional skills and health and preventive skills) under one title (health and safety skill) based on the researcher's proposal because of the convergence and relevance of the two skills to the other, and thus became the list of life skills in the final version includes five basic (97) sub-skills, which were as follows: Health skills Safety (44) sub-skills, environmental skills (20) sub-skills, manual skills (13) sub-skills, problem-solving skills (10) sub-decision-making skills It includes (10) sub-skill.

**Building the test:** The test paragraphs were formulated in a multiple choice mode. (35) test paragraphs were drafted with (4) alternatives to the same paragraph. In view of this, the necessary deletion and modification have been made. The test map has been prepared as shown in Table (4) below:

**Table 4:** Life Skills Test Map

| total summation | Skills and weights |                 |           |    |                   | Content weights | Skills<br>Content |
|-----------------|--------------------|-----------------|-----------|----|-------------------|-----------------|-------------------|
|                 | Make decision      | Problem Solving | Hand made |    | Health and safety |                 |                   |
| 13              | 1                  | 1               | 2         | 13 | 6                 | 89.38%          | Chapter six       |
| 13              | 1                  | 1               | 2         | 13 | 6                 | 89.38%          | seventh chapter   |
| 9               | 1                  | 1               | 1         | 9  | 4                 | 22.22%          | Chapter VIII      |
| 35              | 3                  | 3               | 5         | 35 | 16                | 100%            | total summation   |

**Test Validity: Done**

- Statistical Analysis Sample: The test was applied to a sample of (100) first grade middle school students in Adnaniya Secondary School for girls in order to verify the clarity of the test items, their level of ease, the power of distinguishing them, the effectiveness of their incorrect alternatives, and the time taken to answer the test items. The time taken to answer the test was (60) minutes. The coefficient of ease of the paragraph ranged between (333.0 - 629.0), and this within the acceptable level. The discriminatory power of the paragraph ranged from 269.0 to 666.0 within the acceptable level. The effectiveness of the wrong alternatives for the test items ranged from (01.0 to 43.0), which means that the wrong alternatives have attracted more students from the lower group than the students of the upper group, which indicates the effectiveness of the wrong alternatives.

The stability of the test: To verify the stability of the test, two methods were used: 1- Half-fractionation method: To calculate the stability of the test in the half-fractional method, the

Pearson correlation coefficient was used to calculate the coefficient of stability between the two halves of the test (806.0), then corrected by Spearman-Brown equation. The calculated stability coefficient (892.0) is a good coefficient of stability.

2 - the method of analysis of variance using the equation Alpha-Kronbach: The coefficient of stability calculated by the equation (Alpha-Kronbach) (914.0), which is a good coefficient of stability.

**Application of the experiment:** After completing the requirements of conducting the experiment and achieving parity and determining the scientific material, the experiment was applied by the material school in the school on Tuesday, 26/2/2013 for both groups of study, and ended on Sunday, 28/4/2013.

**Statistical Methods:** Statistical methods were used: t-test for two independent samples (t-Test), quadratic test ( $\chi^2$ ), equation of the coefficient of para-coefficient, equation of the coefficient of recognition of the paragraph, equation of the effectiveness of the wrong alternatives, equation Spearman-Brown, coefficient of alpha-cronbach, coefficient Pearson Link.

**Chapter Four: First:** Presentation of the results: To verify the hypothesis of the study, which states that (there are no statistically significant differences between the average scores of the experimental group students and the average of the students of the control group in the post-life skills test). The mean and standard deviation were calculated for the scores of both experimental and control groups in the post-life skills test as shown in the table below:

**Table 5:** T value of the post life skills test for students of both study groups

| Judgment                                    | Significance level | T value |            | standard deviation | Arithmetic mean | number | the group    |
|---|--------------------|---------|------------|--------------------|-----------------|--------|--------------|
|   |                    | Tabular | Calculated |                    |                 |        |              |
| Function in favor of the experimental group | 0.05               | 2.000   | 2.297      | 5.809              | 27.923          | 38     | Experimental |
|   |                    |         |            | 4.606              | 21.157          | 38     | Control      |

The above table shows that the average scores of the experimental group students (921.27), while the average scores of the students of the control group (157.25), and by applying the T-test equation for two independent samples, the calculated T value (297.2) is greater than the tabular value. Therefore, the zero hypothesis is rejected, meaning that there is a statistically significant difference between the two groups in the average life skills test scores for the benefit of the experimental group studied according to the SOM model. Swom).

**Second: Interpretation of the results:** 1 - that teaching according to the educational models that are concerned with the integration of thinking skills through the curriculum, including the model of Swom (Swom) is designed to increase the awareness of learners and strengthen it by focusing on the higher levels of thinking, and that their practice of comparative questioning skills and generate ideas Prediction, problem solving, and decision-making can increase their ability to employ them in similar situations outside the school. This is confirmed by Robert Swartz, a theorist of this trend that teaching thinking through subjects reinforces the learning of mental processes by learning them within the prescribed subjects. Novell and Seifan, 2011: 50) Experience has also shown that learning scientific concepts, facts and information through the use of different thinking skills achieves better results in academic achievement (Alawi and others, 2008: 24).

2 - The researcher believes that life skills (health and safety, preventive, environmental, problem solving, decision making) are all relevant to the curriculum of biology, and that they fit with the students of the middle stage who are in adolescence, which is one of the most important stages that In the course of his life, man learns and acquires a lot of skills and experiences that determine his personality and skills, especially since biology books also represent the basic field for the development of students' life skills by virtue of the nature of their subjects related to their environment. (Sudanese and Masoudi, 2011: 117)

3 - Teaching according to the model ((Swom) trains the student on life skills implicitly and clearly and simple, especially the skills of problem-solving and decision-making, as the development of life skills of the student is influenced by thinking skills and contribute positively to the acquisition and development of basic life skills. , 1999: 89)

The results of the present study are consistent with those of Qeshta (2008) and Jedi (2012).

## **Chapter V: Chapter V Presents the Conclusions, Recommendations and Proposals**

**First: Conclusions:** In the light of the results of the study, the following can be concluded:

- 1- The preference of the Swom model in teaching in the usual way.
- 2 - The model has a prominent role in achieving positive learner in educational situations through active participation in learning the skills involved in the model.
3. The model has an important role in In developing life skills necessary to adapt students to the surrounding environment and society.

**Second: Recommendations:** In the light of the results of the study, the researcher recommends the following:

- 1- Adopting the model of Swom as one of the modern educational models in the teaching of scientific materials, including biology in the intermediate stage.
- 2 - Adopting the concept of life skills as a modern field of education suitable for all stages of education, and the development of specific programs aimed at their development.
- 3 - The responsibility of determining the life skills necessary for students at each stage of study to experts specialized in these areas.

4. Directing the attention of those in charge of curriculum numbers to the importance of introducing a special material of life skills within the curriculum and giving great importance in including the most important life skills needed by students and each according to the stage of study, as is the practice in many Arab and foreign countries.

**Third: Proposals:** In light of the study results, the researcher proposes the following:

Conducting a study to identify the effect of the Swom model in teaching other scientific subjects and in other educational stages on innovative thinking and critical thinking.

2. Conducting a similar study to the current study on primary school students.

3. Conduct a study to identify the impact of other educational models on the development of life skills.

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