


The Effectiveness of Imaginative Learning for Secondary School Biology Teachers in Al-Balqa Governorate Schools

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ملخص البحث:

أثر استخدام استراتيجية التعلم التخيلي لمعلمي مادة الأحياء بالمدارس الثانوية في مدارس محافظة البلقاء

تهدف الدراسة إلى الكشف عن حقيقة التعلم التخيلي لمعلمي مادة الأحياء في المدرسة الثانوية في محافظة البلقاء حول الردود التي تم اعتماداً على المتغيرات: الجنس والمؤهلات. وتألقت عينة الدراسة من ٣٠٠ مدرسا، حيث بلغ عدد المدرسين المستجيبين في محافظة البلقاء (١٥٠)، من المدرسين في مدينة السلط. وكان الهدف من هذه الدراسة هو وضع استبيان يتألف من (٢٧) بنداً. وأظهرت النتائج أن واقع التعلم الخيالي في معلمي المدارس الثانوية في مديرية البلقاء و مدينة السلط مرتفع، حيث كانت المرتبة الأولى بعد الصفات الشخصية لمعلم المدرسة مع متوسط (٤.١٠) وانحراف معياري (٥.٤٦). من خلال عينة من الردود على الأفراد دراسة عالية، تليها في المركز الثاني مجال العلاقات الاجتماعية مع متوسط (٤.٠٧) وانحراف معياري (٥.٤) ودرجة عالية، في حين أن المركز الثالث كان المجال الإداري لمتوسط (٣.٩٩) وانحراف معياري (٧.٦)، في حين احتل المركز الرابع في مجال الخيال مع متوسط (٣.٧٠) وانحراف معياري (٩.٧)، في حين أنه في المركز الخامس كان مجال أوستيبياتيكي (٣.٣٠) وانحراف معياري (٨.٩) ارتفاع في مستوى التعلم التخيلي، أظهرت النتائج كذلك وجود اختلافات ذات دلالة إحصائية على مستوى الأهمية (٠.٠٥ = (أ)) على الدرجات الكلية لواقع التعلم التخيلي وفقا لنوع الجنس لصالح الذكور، وأظهرت النتائج في غياب اختلافات كبيرة في مستوى الأهمية الإحصائية (٠.٠٥ = أ) على الدرجات الكلية للدرجة وحقيقة التعلم الخيالي في المدارس الثانوية الحكومية للمعلمين اعتماداً على متغير التأهيل الأكاديمي. وخرجت الدراسة بعدة توصيات منها: إدارة التعليم واختيار المديرين وفقاً للمعايير التي ستشجع على التعلم التخيلي للمدرسين.

الكلمات الرئيسية: التعلم التخيلي، معلمي المدارس الثانوية.

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Abstract:

The study aimed to reveal the reality of imaginative learning for Secondary school biology teachers in Al-Balqa Governorate about respondents responses depending on variables: sex and qualifications.

The study sample consisted of 300 teachers, where the number of respondents in the upbringing of Balqa Governorate (150) teachers, 150 teachers in the Salt city . To achieve the objective of the study was to develop a questionnaire consisting of (27) items. The results showed that the reality of Imaginative learning at the secondary school teachers in the Albalqa Directorate and a brigade of Salt city is high, As it was the first ranked after the personal qualities of the school's teacher with a mean (4.10) and a standard deviation (546.) By the sample individuals responses study highly, followed in second place the second area of social relations with a mean (4.07) and a standard deviation (54) and high degree, while the third place was the administrative area of a mean (3.99) and a standard deviation (76), while fourth place was the imaginative field with a mean (3.70) and a standard deviation (97), while in fifth place was the domain of Osteopathic a mean (3.30) and a standard deviation (89) and a high level of imaginative learning , and noted the results as well as to the existence of statistically significant differences at the significance level ($0.05 = \alpha$) on the total score of the reality of imaginative learning according to gender in favor of males, and the results showed well in the absence of significant differences statistical significance level ($0.05 = \alpha$) on the total score of the degree and the reality of imaginative learning at teachers government secondary school depending on academic qualification variable. The study came up with several recommendations including:

The Directorate of education and selection of directors in accordance with the standards which will be to encourage imaginative learning of teachers.

Keywords: imaginative learning, high school teachers

The study problem and its significance

Introduction:

The imaginatively development process starting from pre-school, any pre-teaching in the home through the primary care for a child under their parent's eyes briefing him to stimuli working to perceive sensory and mental hiring and exploitation of the surrounding environment naturally and socially, the wealth of means and potential ore and non-development ore, some cognitive games and interact with others.

So countries nowadays focused on the great attention to child-rearing for many reasons, including the close relationship between development and child-raring and the belief that the UN's future depends on the construction of generations of children and prepare them for

contemporary life:" Because no economic and social development must be based on a solid foundation of human development, without human capability of imaginatively make any development does not exist, except in imagination so it was necessary to mobilize the intellectual, spiritual and physical efforts to nurture the child and his interest (zidane and Mufeed 2003.p.439).

The school system educationally, culturally, socially and organically linked to many of the direct and the indirect factors, and it is obviously forms the variable's basis in this system, it is natural that the success of this system successfully influenced its employees, and see the school principal as a cornerstone upon which the entity of the school, the engine for its energy, human potential, physical, directed and the coordinator of these energies and capabilities to achieve the educational goals that the school seeks to achieve, it is the administrative leader of educational- appointed administration. The leadership of the school as it is a person who is entrusted with the presidency of this institution and its leadership of the official side (Badri,2001).

As the human element is the basic material for the performance of the business and its implementation in the organization, which is the origin of growth and continuity , since imaginatively is one of the important means to this growth, the availability of imaginative behavior among workers is an effective element in ensuring that growth and continue whether this growth is based on the human element level of imaginatively in performance. The imaginary process one of the fundamental pillars in the construction of administrative organizations and which raise the level of performance, as the most successful organizations are always seeking to develop imaginative behavior among their employees (Arabiat, 2011)

Taking imaginatively was required in all community institutions, it is better to start educational institutions represented in schools, which lies on the responsibility of educating and rehabilitating the community people to become active members contributing to the society development, and to find solutions to any problems you may face in the future, the traditional approach to education, and the concentration of the educational process about the teacher who teaches information and school's books which is full of information which is interested in quantity not how, the student who receives the information without discussion or convinced, is suitable for getting out the generation who is able to keep pace with changes very fast in this century. It is not logic that students are asked to imaginatively , innovation and the teacher himself lacks of imaginatively and excellence features, because the one who is missing something he can't give it, here the imaginary teacher became capable of devising new methods of teaching and innovate means to transfer information to the student in a manner of

making it convinced and applies this information in their daily lives and help requested imaginary thinking is the purpose for which it is assumed that everyone is seeking it in order to create a imaginary and distinct generation (Mafraji, 2003)

The problem of the study:

The purpose of the study is to know the reality of imaginative learning biology secondary school's teachers in Jordan.

The study goals and questions:

This study aims to find out the reality of imaginative learning at the biology secondary school's teachers, and by answering the following questions:

The first question: what is the reality of imaginative learning in biology secondary school's teachers in Balqa Governorate from their perspective?

The second question: Is there a statically significant differences ($\alpha \leq 0.05$) in the degree of availability of imaginative learning at biology secondary school's teachers due to the variable (sex)?

The third question: Is there a statically significant differences ($\alpha \leq 0.05$) in the degree of imaginative learning at biology secondary school's teachers due to the variable (qualification)?

Term's definition:

There are some terms and concept that will adopt the study and has researchers ever known it definition, conceptually and procedurally in proportion to use this study, as the following:

Imaginative learning : it is an educational process designed to enlighten the youth that what the imaginatively is and its importance and the discovery of methods and training exercise in the face of academic problems that exposed it to insist on addressing them, analyze and criticize and find solutions to them by following the imaginary thinking steps with the need for novelty the solution's elements that you reach them (Abu ala'la, 2002)

While the procedural: it is the product of innovative ways in which children are learning and through innovative thinking and unconventional ways, measured in this study through the study sample responses on the tool that has been prepared for this purpose.

The study limits: this study determined the following:

- Human border: this study will be limited to biology secondary school's teachers in educate Salt city .
- Spatial boundaries: this study will be limited in biology teachers in Jordan.
- Temporal borders: will be determined by the results of this study within the time context in which they will be carried out which is the university academic year 2021/2022.

The study determinants:

It is determined by the study results largely endorsed, the study and the persistence tool, and the degree of sample representation of the community in which it has withdrawn along with the sincerity of the respondents paragraphs tool response. The result's dissemination of this study are not valid unless the society in which they took him to the study sample.

The study importance:

The is gaining importance for being one of the first scientific attempts dealing with research in the reality of imaginative learning , which mainly affect the performance of students and the educational institution's performance which in turn is seeking to progress and excellence. And the importance of the need for imaginative learning in educational institutions for being important variable in building human, which requires to be assimilated to the data change and development, so the UN's future does not depend on just a digital number of the labor force out, but rather to provide the kind of unique and distinct from the administrative staff, which means the creators in various fields, especially in the educational field because it is the means if the human building lost everything.

The importance of the current study as to offer benefits in the field of education, based on what would be provided from findings and recommendations, as the following:

1. Principals: by providing feedback about the importance of imaginative learning in schools.
2. Researchers: by taking advantage of the study tool for measuring the teacher's role in education and student's imaginative development.
3. Library: by providing knowledge, ideas and concepts about the imaginative learning 's role, and the impact of this role on students and thus achieve the educational goals set.

Literature review

First: Theoretical Literature: Theoretical literature included a revision to the most important elements of the theoretical literature related to the subject of the study, which is:

Imaginative learning :

Pledging the education for imaginatively is a requirement should begin since the early ages and continue in the different stages of education that the education before school and the education in the primary levels play the largest role of taking care and enlightening him by training, autonomous self-search and paving the way for the owners of inimitable talents.

Education is a reflection of what is happening in the society. If the society supports the imaginatively and encourage the invention, education will take care of raising students to be imaginary. If the society enhances the imitation, education will do so that imaginatively is the responsibility of all of society even if the family and school carries the largest load.

Al-khateeb (2003) defined Imaginative learning as an education which cares to support students with knowledge and information by enabling them to assimilate it, recognize its levels and work on interaction with other factors to derive new, authentic and valuable results for students and society at the same time.

Al-khateeb (2003) mentioned that Imaginative learning go through four stages which are as follows:

- Preamble stage:

This stage includes three sub-phases which are as follows:

- The phase of earning knowledge and information that forms the scientific background needed to produce imaginatively .
- The phase of rooting information and deepen their understanding in general and information that are related to the subject or the problem in particular and the related materials associated with that phase.
- The phase of the discovery of methods means and substitution those are potential of this process.

- **Interaction stage:**

This stage is characterized that the talented student is absent-minded or absorbing in thinking as if he is practicing daydream. So he is imagining what he wants to do in production and gathering his ideas and information.

- The inspiration, anticipative and enlightenment stage:

After the process of interaction and incubation have been done in the mind of the talented student, the new idea or the desired work moves from unconsciousness to the consciousness and the sense of the student. Thus, the inspiration process which produces imagining of mental images of the thing by his mental sight has been done.

- Maturity, liberality and investigation:

After the process of inspiration and anticipative and what it results in of installation and proof of the foundations, principles, theories and laws which are underpinning the work or the desired production have been done, talented student starts crystallizing the taken or reached idea, organizes it, leads it out in the desired image, makes sure that it confirms with the image and standards which meet the satisfaction and relief and is consistent with community values and philosophy.

Imaginative learning conditions:

Ahmed (2012) pointed out that the achievement of imaginative learning requires a set of conditions, which are:

First: Convincing the rookie with the importance of the imaginatively and innovation in the scientific and cultural progress.

Second: Training rookies on practicing the real imaginatively and its methods and means in many fields according to their educational levels and their special preparations in the areas of imaginatively .

Third: Revealing of the high-preparation students for imaginatively from childhood until the end of university education, making all the possibilities and opportunities available and making the opportunities that help them to advance in the fields of knowledge available .

Forth: Choosing the imaginary teacher that if the teacher is not imaginary , he cannot develop the imaginatively in his students so he is responsible directly more than the rest of the educational process elements despite the importance and the need of them for the imaginatively development.

Fifth: Setting the approach of guidance and counseling for learners to make progress and superiority in educational fields so the approach is a guide for the student. It shows the learner how to exploit his time and organize his life for progress in learning and how to use his energies and capabilities in the collection and retrieval of his information as soon as possible. Abu al-Ola (2002) pointed that Fulfillment of these conditions requires the availability of a climate which prepares individuals to be imaginary , a teacher with capabilities and qualities help him to maintain and invest this climate and a flexible, openness and freedom curriculum which urges students to think in a imaginary way. We will come over it with some details:

First: family climate and breeding imaginatively:

Family is the most important of society fields which its factors and its different variables either develop the imaginary properties for sons or frustrate and bind them. Sons imaginatively is closely linked to the availability of private climate in the family characterized by the following features:

- Acceptance from parents; raising their children's sense of security towards them.
- Tolerance and Non-coercion to allow a sense of independence.

Second: school climate and breeding imaginatively:

In fact, each child has a big amount of imaginatively however, very few of them keep it. So, the primary function of education is to discover ways to take care of that degree of imaginary thinking, which is given to those kids and provide opportunities for its development.

Second: Previous Related Studies

The researcher has conducted comprehensive survey, but she has found a little number of these studies related to this topic. Through hard look regarding the studies that the researcher has detected, she has found a number of studies dealing with imaginative learning and its relation with other variables.

A- Arab Studies

Al-Isawi Study (1994): its title is "the role of future Arab education in development of imaginary skills". The research has dealt with the skills included in normal personality, in addition to the skills that our Arab

institutions seek to develop for individuals in order to face the changes of twenty- first century. Furthermore, it has dealt with the importance of imaginatively in society life, the imaginary practical nature, the characteristics of imaginary person, steps and phases of imaginatively process, and the methods of developing imaginary characteristics including educational institutions.

Al-Atheem Study (1998): its title is "necessary constituents for imaginative learning development- analytical study". The research aims to recognize constituents of scientific imaginatively which the researcher has identified in outdistancing the reality, committing the facts, liberation, depth, and hard work. In addition, it aims to recognize constituents of imaginative learning which the researcher is identified in the imaginatively in education that is not related to specific phase of growth. But the imaginatively is related to climate of freedom and environmental factors intended for the imaginatively.

Al-Khateeb Study (2003): its title is "the roles of teacher in imaginative learning in Al-Mwhoubeen school". The researcher has used descriptive analytical approach in which they describe the roles of talented teacher. The sample of study was teachers of secondary stage which is reached 160 teachers in governorates of Gaza. The results have showed declining the level of effectiveness of talented teacher with his students, and declining the level of developing talents and abilities for talented students.

Al-Bashri Study (2005): its title is "imaginary abilities development". It is experimental study regarding sample from intermediate stage. For achieving the objective of this study, the researcher has used semi-experimental approach. He has settled for choosing randomly to entire grade (25) students among many grades in school that has been chosen randomly (as an experimental group) among schools of Al-Riyad. Then, it has been chosen entire grade (23) students randomly from other to be (control group). Then, the researcher is applied measurement study (Toran test) for innovative thinking : on the two groups (pre measuring) then the experimental group just exposed to developing imaginary abilities program (for 8 weeks) while the regulated group was left to exercise its usual school activity, and by the end of training the experimental group period , the researcher applied the same former test on all individuals of the two experimental groups (post test) the results showed that the training program contributed in improving the level of experimental group individuals performance in details ability in comparison with the regulated group performance.

-Balwani study (2008) entitled " the role of school management in developing imaginatively at biology teachers in districts of north Palestine and their obstacles from their managers points" , this study aimed at knowing the role of the school management in developing imaginatively at

biology teachers in (Nablus, Tulkarm, Qalqilya, Jenin, Tubas, Salfit) and it aimed at knowing the role of school management in developing imaginatively from managers points with the difference of (gender, scientific qualification, service years, specialized in bachelor degree, workplace) variables, the study sample consisted of (215) manager (males and females), equal to (50%) of total number of managers, the descriptive approach was used to collect data from study sample, the researcher prepared a questionnaire of (39) questions, in addition to two constructive questions were distributed on the study sample to get acquainted with the role of school management in developing imaginatively at biology teachers in north districts and their obstacles, the study had many results, the most important are : that the field of the educational methods in developing imaginatively was medium.

-Al-Amiry study (2014) entitled " the impact of a proposed training program to develop some imaginary abilities (kinetic) of fifth grade pupils, the study was applied to the fifth grade students in Al-Urfaan School, the researcher used the experimental approach, and results showed statistical significance differences in the three imaginary abilities (the ability to overcome problems, imagination, concentration) between the two groups experimental and regulated and for the post tests, the most important recommendation was working on using new and innovative methods in physical education lesson to develop imaginatively .

Foreign studies

-Leaster study (1993), necessary for a school administration's member skills to meet the challenges of the twenty-first century" this study aimed to determine the necessary for the school administration member who holds the positions of leadership in school skills (school director, deputy director) and so as to meet the twenty century challenges and applied the questionnaire as a tool for collecting data from the field to the sample 280 members included all the various stages of education (primary and secondary (lower) primary and secondary (higher) in the city of ports mort in Britain, has used in the descriptive field, the study found several results highlighted by respondents adoption of the administrative imaginatively development and importance through rehabilitation and training individuals in order to increase the communication's effectiveness with the local community as well as human relations skills and eventually study identified the respondents needs from the scientific topics they need, then the recommended work programs covering these topics, imaginary ways that contribute to the raise administrative efficiency in the future with focusing on leadership and management topics, imaginatively decision making and communication skills with the local community and computer applications in the school and the human relations management skill.

- Fuentes study (1996) " change the innovation strategies different culturally schools for the children of age sex" this study focusing on the administrative leadership for innovation and change development, through a special program was applied to a sample of American schools and assistant managers amounted to (500 state (Arkansas, Texas, Louisiana, New Mexico, Oklahoma) and used the field descriptive approach and collected data through interviews, questionnaires, and observations, and integrated the tools with each other in order to develop a scientific visualization aim to improve the leaders of these schools performance and what is covered by managers educators and assistants and put this study, asset of recommendations that can benefit this area when working out. The results of this study that there is no statically significant differences at the significance level ($\alpha = 05.0$) in terms of administrative leadership for the development of innovation and change the due to the gender and experience variables.
- Shewing (2003), conducted a study to a measure the impact of teacher skill and his imaginatively on the level of academic student achievement and scientific researchers used the descriptive approach and formed the sample of 62 primary schools and 58 of primary school and 10476 teachers and 71969 students from six grade in Hong Kong schools, and the most important results in teacher's imaginatively and his skill significantly associated in the average of scientific student superiority whenever the teacher imaginatively and innovation in teaching methods and conveyed the information to the student whenever the student ahead in his education, and affect the teacher imaginatively to build student self-concepts and his ability to his actions, both control within inside and outside school and the results have created a relationship between the teacher imaginatively and the student's mental state.
- Jackson (2006), in his study which aimed to reveal the imaginary capacity that must be owned by academics working in the higher education institutions so that they can develop and evaluate their imagination in these institutions in united kingdom, and the researcher used the descriptive approach since the sample consisted of 50 faculty member and used the questionnaire as a tool to collect data and the results showed a need for academics to three types of capacity, which are: analytical ability which falls under the analysis, evaluation, reporting and comparison and operation capabilities which falls under the bellow, the application, the implementation, and imaginary capabilities which includes imagination, installation, connectivity, discovery innovation and adaptation.
- Salvin (2007) study, aimed to investigate the social studies teachers standpoint at the secondary level in the Us state of California to apply imaginary thinking skills as chosen (30) teachers randomly, noted the

extent to enable them to teach imaginary thinking skills, the study used a record of which teacher's behaviors within the class room note indirectly by recording the performance of teachers to a video, and the study results showed a low level of imaginary thinking use by teachers strategies.

Previous studies summary and the location of the current study including:

The researcher got the benefit from showing the former studies that she increased her awareness of study subject. Also, she will get the benefit from the former study tools in developing the current study tool, and by comparing these former study results with the results of the current study. This study is similar partially to the former studies for it takes the imaginary environment subject at schools, with the difference of study community represented here by the secondary stage teachers. This study is characterized by that it may be one of the rare studies that search in knowing the reality of imaginary environment in the biology teachers , and it is a subject was not taken by the former studies.

Field Study

Study Approach:

Depending on the descriptive and survey approach in achieving study purposes for it is the most suitable manner to search for the current study problem.

Study Sample:

A random class sample will be chosen and represented the study community of secondary stage teachers in directorate of education in Salt city , they are (150), and of secondary stage teachers in Salt city , they are (150).

Table (1)

Distribution of Study Sample Individuals According to the Variables of

Percentage	Number	Category	Variable
% 60.0	179	Male	Gender
% 30.0	89	Female	
% 100	268	Total	
% 90.0	206	Bachelor Degree	Scientific Qualification
% 0.0	12	High Studies	
% 100	268	Total	

Gender and Scientific Qualification

Third: Study Tool :

The research used the questionnaire as a tool to collect the required data for this study for it is the means that by it she collects the required data to answer research questions, and keeping along with this study conditions

and the nature of data that are wanted to be collected, and on the followed approach in the study, its purposes and questions , the allowed time for it and the available concrete possibilities, it was reached that the most suitable tool for achieving this study purposes is " Questionnaire" , and after looking at the educational literature and the former studies related to study problem, the research determined the major fields of the tool as follows :

- First Field : the personal features of school teacher, its paragraphs are (9).
- Second Field : Administrative, its paragraphs are (5).
- Third Field : social relationships, its paragraphs are (3).
- Fourth Field : the imaginary field, its paragraphs are (6).
- Fifth Field : calendar , its paragraphs are (4).

The tool was finally consisted of (27) paragraphs, appendix (1) illustrates the study tool with its final image.

The answer level was graded for every paragraph according to Fifth Likert Scale and was determined in five grades as follows (I extremely agree- I agree- neutral- I don't agree- I don't agree extremely) and usage of judging results was conducted which was divided into (low- medium- high), according to the following equation:

The highest limit of the scale- the lowest limit of the scal / categories number $1-5 = 3/4 = 1.33$

Then, the categories become as follows :

(2.33-1) low reality degree

(3.67-2.34) medium reality degree

(5-3.68) high reality degree

Fourth: the Validity of the Study Tool :

This kind of validity searches for verifying that the scale or questionnaire that the research designed is really measuring what she designed to measure it by showing the questionnaire to a group of experts in the field that this tools belongs to , and this is called the validity of arbitrators, where the research showed the questionnaire in its initial image to a group of experienced and competent experts in educational management and educational planning fields, where they expressed their opinions and notes in the following answers :

1- the clearness and validity of the questionnaire for the purpose that it was designed to.

2- the appropriateness degree of paragraphs to the field they are under.

3- the phrases are correct in terms of the linguistic wording.

4- adding, removing or adjusting the paragraphs that include tool according to what they see appropriate .

On the light of the arbitrators notes, the researcher made adjustments according to the arbitrators notes, and the paragraphs was adopted, the agreement rate among the arbitrators is not less than 80% on its validity and

appropriateness of the study and producing it with its final image, it consisted of (26) paragraphs.

Fifth: the Stability of Study Tool:

To make sure of the stability of the study tool , the research used tes and retest ways, she applied the questionnaire on an exploratory sample, the sample was chosen with the random class way consisted of (30) teacher(males and females) outside the study sample and the same community, and with anachronism (14) days between the two times applications, then Pearson Correlation Coefficient was calculated between the two time applications, and the internal consistency Cronbach Alpha was used, for the questionnaire paragraphs with the total degree of the axis they belong to, table (2) illustrates the coefficients of questionnaire stability as follows :

Table (2)

Coefficients of Study Tool Stability Using Pearson Correlation Coefficient and Cronbach Alpha

Number	Field	Coefficient	Cronbach
Field		Pearson Correlation	Alpha
١	The personal features of school teacher	.٨٨	.٩٣
٢	Administrative field	.٨٥	.٩٠
٣	Social relationships	.٨٤	.٨٩
٤	Imaginary field	.٨٩	.٩٣
٥	Calendar field	.٨٧	.٩٠
	Total degree	.٩٦	.٩٥

We notice from the last table that the stability coefficients of questionnaire dimensions ranged between (.89-.84) for Pearson Correlation Coefficients, and ranged between (.93-.90) for Cronbach Alpha Coefficients, this means that the questionnaire has an acceptable (constancy) stability coefficient for the current study purposes.

After making sure of validity and stability of study tool and determining the required sample for applying study tool purposes, and getting the official approvals for applying the study, the researcher had distributed the questionnaire on study sample individuals of secondary stage teachers in directorate of education in Salt city . Then, the questionnaires were collected and emptied and entered to the computer to get results.

Having facilitating mission letter from to the Directorate of education in Jordan.

Having facilitating mission letter from Directorate of education to the Directorate of education in Salt city .

Having a statistic of teacher numbers in the secondary stage in the biology

teachers of the directorates.

The researcher had distributed the study tool on the study sample of teachers in the secondary stage in the subordinate biology teachers which are six.

Statistical Processing:

To achieve study purposes, statistical packages of social sciences (SPSS) program was used to answer its questions, as follows:

To answer the first question, standard deviation and arithmetic averages were used

To answer the second and third questions, (T) test for two independent samples, and one-way analysis of variance (One Way Anova) were used

Study Variables:

Independent Variables :

-Gender: it has two categories : Male, Female

- Scientific Qualification: it has two levels : (Bachelor, high studies)

Dependent Variable:

The reality of imaginative learning of the secondary stage teachers in directorate of education in Salt city .

Results:

Results related to the first question : what is imaginative learning for biology secondary schools teachers in directorate of education in Salt city from their points ?

To answer this question, standard deviations and arithmetic averages were extracted to the response of study sample on the reality of imaginary environment at the dimensions level and the total degree of the tool, and to determine the degree of the imaginative learning , the standard shown was used to every dimension of scale dimensions :

Table (3)

Arithmetic Averages and Standard Deviations of the Answers of Study Sample Individuals on the Scale Dimensions of the Reality of Imaginary Environment

Number	Dimension	Arithmetic Average	Standard Deviation	Level
1-	Personal features of the school teacher	٤.١٠	.٥٤٦	High
2-	Administrative field	٣.٩٩	.٧٦	High
3-	Social relationships	٤.٠٧	.٥٤	High
4-	Imaginary field	٣.٧٠	.٩٧	High
5-	Calendar field	٣.٣٠	.٨٩	Medium
	Total degree	٣.٦٧	.٦٧	High

Table (3) refers that the first place came for the first dimension the personal features of the school teacher with arithmetic average (4.10) and standard deviation (.546) according to the study sample individuals responses and

with a high degree, and in the second place the second field the social relationships with arithmetic average (4.07) and standard deviation (.54) and with a high degree, the third place was for the administrative field with arithmetic average (3.99) and standard deviation (.76), the fourth place was for the imaginative field with arithmetic average (3.70) and standard deviation (.97), the fifth place was for the calendar field with arithmetic average (3.30) and standard deviation (.89) and with a higher level than the imaginative learning .

Table (4)

Arithmetic Averages and Standard Deviations of the Answers of Study Sample Individuals on the First Dimension of the Personal Features of the School Teacher

Number	Paragraph	Arithmetic Average	Standard Deviation	Degree
١	He takes care of his appearance and daily clothes	٤.٠٨	١.٠٧٣	High
٢	He behaves with the guardians politely	٤.٦٤	.٥٦	High
٣	He grows inside the students proud of their principles at school	٤.٦٤	.٥٦	High
٤	He accomplishes his tasks fully and transparently	٤.٠١	.٣٦	High
٥	He accepts criticism from school master	٤.٠٥	.٤١٣	High
٦	He has a credibility in dealing with students	٤.٨٥	.٣٥٢	High
٧	He has a conscience in accomplishing his tasks	٤.٥٠	.٦٥	High
٨	He controls his feelings when having unintentional overtakes by the students	٤.٣٧	.٨١٩	High
٩	He shows flexibility in his work	٤.٥٠	.٦٥	High
	Total degree	٤.١٠	.٥٤٦	High

Table (4) refers that the first place came for the paragraph (6) " He has a credibility in dealing with students". With arithmetic average (4.85) and standard deviation (.35) according to the study sample individuals responses and with a high degree, in the second place the two paragraphs (2,3), " He behaves with the guardians politely" and " He grows inside the students proud of their principles at school" with arithmetic average (4.64) and

standard deviation (.56) and with a high degree, paragraph (4) " He accomplishes his tasks fully and transparently" came in the last place according to study sample individuals responses on the dimension of personal features of school teacher with arithmetic average (4.01) and standard deviation (.36) and with a high degree, the total degree of the personal features of school teacher field came with a high degree according to study sample individuals responses with arithmetic average (4.10) and standard deviation (.54.).

Table (5)

Arithmetic Averages and Standard Deviations of the Answers of Study Sample Individuals on the Second Dimension of the Administrative Field

Number	Paragraph	Arithmetic Average	Standard Deviation	Level
١	He commits applying order inside the school	٣.٦٨	.٧٧١	High
٢	He commits implementing the usual laws and orders inside the school	٤.١٤	.٦٢٠	High
٣	Teacher explains the studied good planning principles for encountering the educational attitude effectively and confidently	٤.٨٠	.٣٣٠	High
٤	He runs the class with democracy	٤.٠١	.٨٠	High
٥	He provides the suitable class atmosphere to increase the effectiveness of student performance	٣.٩٥	.٧٨٨	High
	Total degree	٣.٩٩	.٧٦	High

Table (5) refers that the first place came for the paragraph (3) " he has the ability to meet persons for the first time and has debates". With arithmetic average (4.80) and standard deviation (.33) and with a high degree, paragraph (1) " He commits applying order inside the school " came in the last place according to the answers of the study sample individuals on the dimension of the administrative field with arithmetic average (3.68) and standard deviation (.77) and with a high degree, the total degree for the administrative field dimension came with a high degree according to the answers of the study sample individuals with arithmetic average (3.99) and standard deviation (.76).

Arithmetic Averages and Standard Deviations of the Answers of Study Sample Individuals on the Third Dimension of the Social Relationships

Number	Paragraph	Arithmetic Average	Standard Deviation	Degree
١	He takes care to the social relationships with students inside the school	٤.٦٢	.٥١٥	High
٢	He participates with the general social occasions of the students by condolence or congratulation	٤.٣٥	.٦١٤	High
٣	He helps the student to solve their social relationships	٤.٥٠	.٥٣	High
	Total degree	٤.٠٧	.١١٤	High

Table (6) refers that the first place was for paragraph (1) He takes care to the social relationships with students inside the school with arithmetic average (4.62) and standard deviation (.51) according to the responses of the study sample individuals and with a high degree, paragraph (2) He participates with the general social occasions of the students by condolence or congratulation, came in the last place to the responses of the study sample individuals on the social field with arithmetic average (4.35) and standard deviation (.614) and with a high degree, the total degree for the social field came with a high degree to the responses of the study sample individuals with arithmetic average (4.07) and standard deviation (.116).

Table (7)

Arithmetic Averages and Standard Deviations of the Answers of Study Sample Individuals on the Fourth Dimension of the Imaginative field

Number	Paragraph	Arithmetic Average	Standard Deviation	Degree
١	Teacher does deeds with a high competence	٣.٩٨	.٩٥	High
٢	Teacher organizes the class environment	٣.٤٨	١.٤١١	Medium
٣	He encourages the student to imaginary thinking inside the school	٣.٦١	١.٢٤	Medium
٤	Teacher exerts the sufficient effort to accomplish the job tasks in time	٤.١٧	١.٠٤	High

٥	Teacher memorizes the new students and takes care of them	٣.٧١	١.٠٩	High
٦	Teacher realizes the usual laws and regulations inside the school	٣.٨٨	١.٣٧	High
	Total degree	٣.٧٠	.٩٧	High

Table (7) refers that the first place was for paragraph (4) Teacher exerts the sufficient effort to accomplish the job tasks in time, with arithmetic average (4.17) and standard deviation (1.04) according to the responses of the study sample individuals on the imaginative field and with a high degree, paragraph (2) Teacher organizes the class environment, came in the last place according to the responses of the study sample individuals on the imaginative field with arithmetic average (3.48) and standard deviation (1.411) and with a medium degree, the total degree of the imaginative field came with a high degree according to the responses of the study sample individuals with arithmetic average (3.70) and standard deviation (.97).

Table (8)

Arithmetic Averages and Standard Deviations of the Answers of Study Sample Individuals on the Fifth Dimension of the Calendar Field

Number	Paragraph	Arithmetic Average	Standard Deviation	Degree
١	Teacher assesses student performance at school to determine weakness and strong sides for them	٤.٢٥	.٩٥	High
٢	Teacher assesses students to measure their abilities and education skills	٣.٤٢	.٧٩	Medium
٣	Teacher coordinates with the schoolmaster continuously to keep up with the education process	٣.٧٠	١.٣١	High
٤	Teacher determines the modern education means	٣.٨٠	.٨٢٧	High
	Total degree	٣.٦٧	.٨٩	Medium

Table (8) refers that the first place was for paragraph (4) Teacher determines the modern education means, with arithmetic average (3.80) and standard deviation (.827) according to the responses of the study sample individuals on the calendar field and with a high degree, paragraph (2) Teacher assesses students to measure their abilities and education skills, came in the last place according to the responses of the study sample individuals on the

imaginative field with arithmetic average (3.42) and standard deviation (.79) and with a medium degree, the total degree of the calendar field came with a medium degree according to the responses of the study sample individuals with arithmetic average (3.67) and standard deviation (.89).

Results related to the second question which : are there any differences with a statistical significance in the degree of having the imaginary environment for the biology secondary schools teachers due to (gender) variable ?

To answer this question, arithmetic averages and standard deviations of the degree of imaginary environment reality for the biology secondary schools teachers were calculated, and (t) test for the independent samples was used to extract the significance of differences in the reality of imaginary environment degree due to gener variable, and table (9) illustrates this :

Table (9)

Arithmetic Averages and Standard Deviations and Results of (t-test) for the differences significance of imaginative learning reality degree due to the gender variable

Educational Reality	Gender	Number	Arithmetic Average	Standard Deviation	Value of Calculated T	Significance level
Imaginary	male	179	2.2481	.47448	0.169	...
	female	89	2.0418	.4248	0.094	

Results in table (9) refer to the presence of statistical significance differences at significance level ($\alpha=0.05$) on the total degree of the imaginative learning reality duo to gender variable and for males.

Results related to the third question : are there any statistical significance differences (0.05) in the degree of having imaginative learning for biology secondary schools teachers due to the (scientific qualification(variable)?

To answer this hypothesis, arithmetic averages , standard deviations and results of (t-test) of the differences significance of the imaginative learning reality due to the scientific qualification variable were calculated, and table (10) illustrates this :

Table (10)

Arithmetic Averages and Standard Deviations and Results of (t-test) for the imaginative learning reality degree due to the scientific qualification variable

Degree of imaginative learning reality	gender	number	Arithmetic average	Standard deviation	The value of calculated t	Significance level
	Bachelor	206	3.98	.4248	0.094	0.19

	High studies	١٢	٢.٢٤٨١	.٤٧٤٤٨	٥.١٦٩	
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Results in table (10) refer to lack of the presence of statistical significance differences at significance level ($\alpha=0.05$) on the total degree of the imaginative learning reality for biology secondary stage teachers due to scientific qualification variable.

Results Discussion

Discussing results related to the first question: what is the reality of imaginative learning for biology secondary schools teachers in directorate of education in Salt city from their points ?

The dimensions are as follows : the first place was for the first dimension the personal features of the school teacher with arithmetic average (4.10) and standard deviation (.546) according to the responses of the study sample individuals and with a high degree, in the second place the second field the social relationships with arithmetic average (4.07) and standard deviation (.54) and with a high degree, the third place was for administrative field with arithmetic average (3.99) and standard deviation (.76) , the fourth place was for the imaginative field with arithmetic average (3.70) and standard deviation (.97), the fifth place was for the calendar field with arithmetic average (3.30) and standard deviation (.89) and with a high degree of imaginative learning .

The first place was for the first field (personal features) with arithmetic average (4.10) and this result may be due to the awareness of the teacher of the necessity of the appearance and he realizes that the external appearance of the teacher has a big effect on the student, whether the student is small in preliminary schools or young in advanced stages. For the student in all levels looks to the teacher male or female that has a nice look so he is attracted by him or her. Also, the general appearance of the teacher has an importance in setting the class, because it gives him strong personality and imposes his respect upon the student.

The last place was for the calendar field with arithmetic average (3.30) and this result may be due to the most common means of assessing is the tests in the educational institutions, and it is may be the only means at many times, but these tests became having many criticisms, and little by little, it loses its place, because it doesn't encourage to be imaginary .

Now, every dimension will be discussed lonely with some detailing:

After the personal features: in the first-place paragraph (6) he has a credibility in dealing with students with arithmetic average (4.85), paragraph (4) he accomplishes his tasks fully and transparently was in the last place according to the responses of the study sample individuals on the dimension of personal features of the school teacher with arithmetic average (4.01).

This result may be to the teacher awareness that honesty is a crown on the teacher head, if he loses it , he will lose people trust of his knowledge, and what he transfers of knowledge to them, for the student often accepts from his teacher all of what he says, but if teacher lie is shown to the students in some things, it will be reflected on him directly, and leads him to underestimated by the students.

And in the last place, the result may be due to lack of having the extreme strong willing to work, and indolence and laziness of the teacher, because of lack of having sufficient motivations to perform their deeds on the right way and difficulty of life, for the majority of teachers perform additional deeds after finishing their official work, which affects their performance.

Administrative dimension : paragraph (3) was in the first place " he has the ability to meet person for the first time and have debates", with arithmetic average (4.80), paragraph (1) " he commits applying order inside the school" was in the last place with arithmetic average (3.68) and standard deviation (.77) and with a high degree.

The result may be due to that the majority of teachers (males and females) have the ability and flexibility to deal with the students that were basically one day students like them , the last paragraph related to committing applying order , this result is due to that the human naturally doesn't like committing and restricting with orders , because they feel that these orders suppress their freedom.

While after the social relationships, was as follows: the first place was for paragraph (1) he takes care of the social relationships with the students inside the school, with arithmetic average (4.62), paragraph(2) " he participates the students the general social occasions by condolence or congratulation" was in the last place with arithmetic average (4.35).

This result may be due to that the teacher has no problem for participating the students socially inside the school, because he realizes that it is wrong to disregard the personal side of the students in these relationships, because the presence of such relationship raises the ability of each student to do their best, for the institutions do a double effort in a trial to impose a single order that doesn't take into consideration these differences and consider the human as just a machine that must apply what is wanted from , as a result, they won't reach any result, but outside the school, teacher may consider this that it is none of his business and it takes a lot from his time and effort.

After the imaginary field, it was : the first place was for paragraph (4) " teacher exerts the sufficient effort to accomplish the job tasks in time" with arithmetic average (4.17), paragraph (2) " teacher organizes the class environment" was in the last place with arithmetic average (3.48).

This result may be due to teacher feel of their responsibility toward their job, which leads their acceptance of what their job requires of duties, tasks and responsibilities. Regarding the paragraph that was in the first place, it is due to the weak skills of teacher in this field.

The calendar dimension was as follows : the first place was for paragraph (1) " teacher assesses student performance at school to determine weak and strong points of them" according to the responses of the study sample individuals on the calendar field and wit a high degree, paragraph (2) " teacher assesses students to measure their education ability and skills" was in the last place according to the responses of the study sample individuals on the calendar field with arithmetic average with a medium degree, the total degree of the calendar field was with a medium degree according to the responses of the study sample individuals with an arithmetic average.

This result may be due to that teachers most of the time when they start the school year , they do exams that assess the students level and show weak and strong points of them, which encourages teacher to increase caring and motivate strong points and treat weak points, regarding the paragraph that was in the last place, it is due to that teachers don't have enough time, required skill nor the attractive motivations to perform deeds they consider additional from their basic work.

Discussion question 2, state as the following:

Are there statistical significant differences (0.05) in the degree of the reality of imaginative learning at the biology secondary school teachers due to the variable (sex)?

Results indicates that there are statistical significant differences at significant level ($\alpha=0.05$) on the total degree according to the sex variable for males. This result may be due to the orientation of males to live a imaginary dimensions as an economic input helps them to take responsibility for their family life. The result was for males because of multiplicity of tasks required from females inside and outside home , thus the imaginary ability and think imaginary ly in males more than in females , also due to that males have imaginary skills more than females , they are more commonly used for logical intelligent and use left brain , which contains (logic , analytical science, cognitive postural) and other uses of the left brain.

Related results for third question: are there statistical significant differences (0.05) in the degree of the reality of imaginative learning at the biology secondary school teachers due to the variable (qualification)? The results indicates in the table (9) lack of statistical significant differences at the significant level (0.05) on the total degree for the reality of imaginative learning for biology secondary school teachers depending on the educational

qualification variable. The reason may be due to the lack of scientific qualification differences, that individuals of study sample had imaginary skills due to the nature and quality of the scientific preparation and vocational that receives by the teachers in these courses.

Recommendations:

- 1-The directorate of education selects two managers according to the standards which have encouraged for imaginative learning for teachers.
- 2-Directing teachers to follow methods and techniques in the imaginative learning enough to encourage students and raises the level of imaginatively .
- 3-Enrich the imaginary approaches in all levels educational, contributes to raise the levels of students in imaginary thinking.
- 4-Conduct a similar study for other study phases.

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