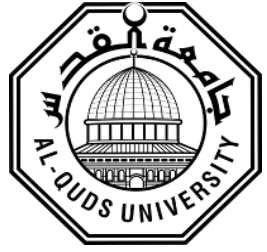


Deanship of Graduate Studies

Al Quds University



**The Actual Use of English Language Teachers for the
Educational Aids in Hebron Governorate and its Relation to
their Knowledge of Brain-Based Learning**

Ahmad Jamil Ahmad Abukhiran

M.A Thesis

Jerusalem, Palestine

١٤٤٢هـ - ٢٠٢١م

**The Actual Use of English Language Teachers for the
Educational Aids in Hebron Governorate and its Relation to
their Knowledge of Brain Researches-Based Learning**

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Bachelor: English literature and Language.

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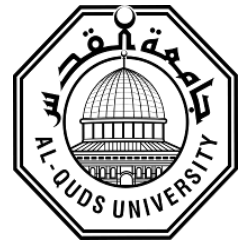
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Thesis approval

**The Actual Use of English Language Teachers for the Educational
Aids in Hebron Governorate and its Relation to their Knowledge of
Brain Researches-Based Learning**


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Jerusalem– Palestine

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Dedication

I dedicate this dissertation to:

The pure soul of my father.

My mother for her endless patience and encouragement during this hard work.

My sisters who has been supporting and encouraging me.

My brothers and all my family for their love, encouragement, and support.

My darling wife, the most beautiful thing happened in my life, the secret of my happiness.

My supervisor for his great kindness and unlimited care.

My professors and teachers.

My friends and colleagues.

To all with warm regards.

Declaration

I certify that this thesis submitted for the degree of Master, is the result of my research, except were otherwise acknowledged, and that this study (or any part of the same) has not been submitted for a higher degree to any other university or institution.

Signed



Ahmad Jamil Ahmad Abukhiran.

Date: 4 /7 / 2021

I

Acknowledgment

I solely extend piles of thanks to university professors for their constant efforts, which led to the success of this work.

Thanks are also extended to the external and the internal examiners. I would like to thank all those who helped me in carrying out this study.

Special thanks and gratitude are extended to my family who supported me and enhanced my faith in the job I am doing.

II

Abstract

This study aimed to identify the reality of using educational aids by teachers of English in the Hebron Governorate and its relationship to their knowledge of brain-based learning. The researcher adopted the descriptive-analytical method, as it is suitable for this study. The study population consisted of all teachers of English in the Directorate of Hebron Governorate, where the researcher applied the study electronically via Google forms by sending the electronic link of the questionnaire to

all members of the study community. The researcher retrieved (168) valid questionnaires for statistical treatment, including (104) male and (64) female teachers.

To achieve the objectives of the study, the researcher prepared a questionnaire consisting of two instruments: the first instrument to measure "the reality of using educational aids by in Hebron Governorate". It consists of (33) items divided into three domains: (educational aids preparation, using educational aids, evaluation). The second instrument to measure "the level of knowledge of teachers of English in brain-based learning in the Hebron Governorate" that consists of (21) items. The validity and reliability of the questionnaire were verified and applied to the actual study sample. Then, the retrieved questionnaire forms were processed through the SPSS statistical packages.

The results of the study have shown that the degree of using the educational aids by teachers of English is high, with a mean of (3.99 out of 5). The results also have shown that there were statistically significant differences between the means of the responses of the study sample about the reality of using educational aids according to (gender, years of experience, district) variables and there were no statistically significant differences between the means of the responses of the study sample about

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the reality of using educational aids according to the academic qualification variable. Besides, the level of knowledge of teachers of English in brain-based learning is high, as it reached a mean of (2.65 out of 3). The results revealed that there were statistically significant differences between the arithmetic averages of the responses of the study sample about the knowledge of brain-based learning according to the variables of (gender, years of experience, directorate), and there were no statistically

significant differences between the means of the responses of the study sample about the level of knowledge of brain-based learning according to the degree variable. Finally, the results of the study have also shown the existence of a direct, statistically significant, correlation between the reality of using teaching aids teachers of English, and their level of knowledge of brain-based learning.

IV

واقع استخدام معلمي اللغة الإنجليزية في محافظة الخليل الوسائل التعليمية وعلاقتها بمعرفتهم
بالتعلم القائم على أبحاث الدماغ
إعداد: أحمد جميل أحمد أبو خيران.
المشرف: د. جمال نافع.
الملخص

هدفت هذه الدراسة التعرف إلى واقع استخدام معلمي اللغة الإنجليزية في محافظة الخليل الوسائل التعليمية وعلاقتها بمعرفتهم بالتعلم القائم على أبحاث الدماغ. اعتمد الباحث المنهج الوصفي التحليلي، لمناسبته لمثل هذا النوع من الدراسات. تكون مجتمع الدراسة من جميع معلمي اللغة الإنجليزية في مديريات محافظة الخليل، حيث قام الباحث بتطبيق الدراسة إلكترونياً عبر نماذج GOOGLE، من خلال إرسال الرابط الإلكتروني للاستبانة إلى كافة أفراد مجتمع الدراسة، وقد استرد (168) استبانة صالحة للمعالجة الإحصائية، منهم (104) معلمين، و(64) معلمة.

ولتحقيق أهداف الدراسة، قام الباحث بإعداد استبانة مكونة من أداتين: الاداة الأولى لقياس "واقع استخدام معلمي اللغة الإنجليزية في محافظة الخليل الوسائل التعليمية"؛ تكون من (33) فقرة موزعة على ثلاث مجالات: (اعداد الوسائل التعليمية، استخدام الوسائل التعليمية، التقويم). أما الاداة الثانية لقياس "مستوى معرفة معلمي اللغة الإنجليزية في محافظة الخليل بالتعلم القائم على أبحاث الدماغ"؛ تكون من (21) فقرة. وتم التحقق من صدق الاستبانة وثباتها، ثم تطبيقها على عينة الدراسة الفعلية، ومعالجة الاستبانات المستردة من خلال برنامج الرزم الإحصائية SPSS. وقد بينت نتائج الدراسة أن درجة استخدام معلمو اللغة الإنجليزية للوسائل التعليمية مرتفعة، حيث

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بلغ الوسط الحسابي (3.99 من 5)، كما أظهرت النتائج وجود فروق ذات دلالة احصائية بين

المتوسطات الحسابية لاستجابات عينة الدراسة حول واقع استخدام الوسائل التعليمية تبعاً للمتغيرات (الجنس لصالح الإناث، سنوات الخبرة لصالح الفئة أكثر من 15 سنة، المديرية لصالح مديرية يطا)، ولا يوجد فروق ذات دلالة احصائية بين المتوسطات الحسابية لاستجابات عينة الدراسة حول واقع استخدام الوسائل التعليمية تبعاً لمتغير الدرجة العلمية. وأظهرت النتائج أن مستوى معرفة معلمي اللغة الإنجليزية في محافظة الخليل بالتعلم القائم على أبحاث الدماغ مرتفع، حيث بلغ الوسط الحسابي (2.65 من 3)، وكشفت النتائج عن وجود فروق ذات دلالة احصائية بين المتوسطات الحسابية لاستجابات عينة الدراسة حول المعرفة بالتعلم القائم على أبحاث الدماغ تبعاً للمتغيرات (الجنس، سنوات الخبرة، المديرية)، ولا يوجد فروق ذات دلالة احصائية بين المتوسطات الحسابية لاستجابات عينة الدراسة مستوى المعرفة بالتعلم القائم على أبحاث الدماغ تبعاً لمتغير الدرجة العلمية. وأخيراً أظهرت نتائج الدراسة وجود علاقة ارتباطية طردية ذات دلالة إحصائية بين واقع استخدام معلمي اللغة الإنجليزية الوسائل التعليمية، ومستوى معرفتهم بالتعلم القائم على أبحاث الدماغ.

الكلمات المفتاحية: الوسائل التعليمية، التعلم القائم على الدماغ، اللغة الإنجليزية

Chapter One

Background of the study

1.1 Introduction

1.2 Statement of the Problem

1.3 Objectives of the study

1.4 Questions of the study

1.5 Hypotheses of the study

1.6 Significance of the study

1.7 Limitations of the study

1.8 Definition of Terms

Chapter One

Background of the study

1.1 Introduction:

Nowadays, the English language is a global language of science and knowledge. It presents one of the most significant languages of communication and contact among nations. It is the official language in (53) States, with more than (400) million speakers in the world. It is a second language learned widely through public and private educational institutions everywhere. English language teaching is a part of the vision of the Palestinian Ministry of Education. It recognizes the importance of the English language to create a developed society accompanied by rapid global changes.

Ministry of Education aims to teach the English language at its schools; to provide learners with the basic knowledge of the English language. The English language enables them to be successful learners and develops their understanding of real knowledge in oral and written texts. Besides, it develops their ability to understand what they read, listen to and interact with, develops their ability to use linguistic clues to understand the text, develops their reading and writing skills, and develops the process of functional literacy. Moreover, learners can adopt a positive attitude in the target language. They are confident in using the target language and enjoy the learning experience using suitable teaching methods and various communication activities.

Achieving these purposes requires learners to enjoy learning the English language. One of the best methods used to enjoy learners is adopting the educational materials and the teaching patterns that offer a successful experience using enjoyable activities and help them learn the foreign language. These methods were carefully chosen according to the specific nature of every learner (Ministry of Education, 2015).

A teacher is a cornerstone in the educational process. He is one of the factors of achieving the target educational objectives. He also helps students to acquire skills, master them, and understand ideas, concepts and generalizations consciously. A teacher plays a significant role in discovering the specific learning methods and

patterns for each learner and recognizing their brain abilities. Besides, a teacher can identify the learners' visual capabilities, broaden them, and develop the students learning process based on activating both sides of brain function (Al Nashar, 2018).

It has known that a brain structure, its experiences, abilities and capacity distinguish every learner from others. Every side of the brain deals with different educational situations and tasks since the right side of the brain deals with visual situations, whereas the left side deals with the required time to end a specific activity. If the learner is exposed to educational experiences that are less or higher than his brain level, then he will not be affected by this information or experiences, and his understanding will not be developed; instead, he will be limited-minded. Preparing teachers for interaction and cooperation as peer to peer in the classroom setting also helps in acquiring intelligent patterns, thinking abilities and social relations, offering the growth and development of the brain (Afana and Al khuzendar, 2007).

In this context, Al Mabrouk (2016) confirms that "the learners' nature is one of the effective factors of choosing the teaching methods, proving that a suitable method for a certain age does not suit another age" (P. 22).

Al Rabeai and Hamadameen (2011) indicated that "it is necessary to consider the individual differences among learners, in terms of learning or thinking ways, or their ways of retention and understanding as well as their age, gender and social background" (P. 66).

According to Shalabi et. al (2018), "the content and activities of aids should be connected with the students' thinking and prior knowledge and suit their mental and cognitive abilities. This basis is of utmost importance since its unavailability does not achieve the target benefit of the aid" (P.103).

Al-Titi et.al stress that "the success of any learning-teaching situation that helps the learner to achieve the planned aims; refers to the good choice of a teacher for the learning-teaching aids" (p. 137-138). Adding that these aids organize the learning process and facilitate the achievement of performance objectives in a highly professional manner indicating that the choice of educational aids depends on the learners' mental abilities and their physical, cognitive and functioning characteristics.

The outcomes of the research about the relationship between learning and the brain have confirmed that the rich environment, contributing to the development of the brain should consist of new stimuli, challenge the current learner's abilities and offer interactive feedback (Abu Al Sameed, 2007).

Because of the foregoing, the researcher sees that the teacher's awareness of the relationship between learning and the way the brain works helps the teacher to recognize the dominant side among students. Therefore, using the more suitable educational aids for them, avoiding focus on the cognitive side in teaching and evaluation without paying attention to the skills and effective sides. Besides, it helps to prepare the educational settings to activate the mental processes of learners' both sides of the brain. Thus, achieving the planned objectives.

1.2 Statement of the Problem:

The English language is the popular communication language among all countries over the world; since it occupies first place in the internet networks and social media sites. It is one of the easiest languages in the world to learn, but a lot of learners and non-native speakers' learners in particular face difficulties while learning it, especially school students in the Arab countries. This refers to the fact that English language learning occurs away from its natural context, in a society where people don't speak English and consider it a foreign language. Thus, the role of the English language teacher is investing his time inside the classroom to practice the language effectively, create situations that frame the reality that requires the use of the English language.

Some teachers have convictions about the English language and its teaching, representing in most cases constraints in the learning-teaching process. Recently, it was noticed that students at various levels of education showed less interest in learning and the ability to remember what they have learned in the classroom.

Joseph (2015) attributes this to the teaching methods; adopted by the teacher during the teaching process in the classroom. A lot of English language teachers still use the traditional methods to teach the English language as a foreign language, and a lot of them ignore that an integrated teaching curriculum based on how the learners' brain works, has appeared three decades ago. This was confirmed by the outcomes of (Al Shaibani, 2019; Al-Rewali and Al Harbi, 2018) that showed a low level of knowledge about the principles of brain based-learning among female secondary teachers in Al

Saudia; while the results of (Mansy, 2014; Kapadia, 2014) indicated that teachers' perceptions towards brain-based learning are positively connected with the teaching practices.

Because of the above, the researcher figures out the statement of the study in the following main question:

What is the actual Use of the English language teachers for the educational aids in Hebron governorate and its relation to their knowledge of brain researches-based learning?

1.3 Objectives of the study:

This study contributes to achieving the following objectives:

- 1- Recognizing the actual use of the English language teachers for the educational aids in the Hebron Governorate.
- 2- Inquiring if there is a statistically significant difference between means of the study sample responses about the actual use of the educational aids according to the variables (gender, qualification, experience years, directorate).
- 3- Recognizing the level of the English language teachers' knowledge about brain researches-based learning in the Hebron governorate?
- 4- Recognizing if there is a statistically significant difference between the means for the study sample responses about the knowledge level of brain researches-based learning according to the variables (gender, qualification, experience years, directorate).
- 5- Recognizing the correlational relationship between the actual use of the English language teachers' use for the educational aids and their knowledge level of brain researches-based learning.

1.4 Questions of the study:

This study aims to answer the following research questions:

The First Question: What is the actual use of the teachers of English for the educational aids in the Hebron governorate?

The Second Question: Is there a statistically significant difference between the study sample responses' means of the actual use of the educational aids

according to the variables (gender, qualification, experience years, directorate)?

The Third Question: What is the level of the English language teachers' knowledge about brain researches-based learning in the Hebron governorate?

The Fourth Question: Is there a statistically significant difference between the study sample responses' means about the knowledge level of brain researches-based learning according to the variables (gender, qualification experience years, and directorate)?

The Fifth Question: Is there a correlational relationship between the actual use of the English language teachers' use for educational aids and their knowledge level of brain researches-based learning?

1.5 Hypothesis of the study:

This study aims to test the following null hypotheses:

The first hypothesis: There is no statistically significant difference at ($\alpha \leq 0.05$) level between the study sample responses' means about the actual use of the educational aids due to gender.

The second hypothesis: There is no statistically significant difference at ($\alpha \leq 0.05$) level between the study sample responses' means about the actual use of the educational aids due to degree.

The third hypothesis: There is no statistically significant difference at ($\alpha \leq 0.05$) level between the study sample responses' means about the actual use of the educational aids due to experience years.

The fourth hypothesis: There is no statistically significant differences at ($\alpha \leq 0.05$) level between the study sample responses' means about the actual use of the educational aids due to directorate.

The fifth hypothesis: There is no statistically significant differences at ($\alpha \leq 0.05$) level between the study sample responses' means about the knowledge level of brain researches- based learning due to gender.

The sixth hypothesis: There is no statistically significant difference at ($\alpha \leq 0.05$) level between the means of the study sample responses about the knowledge level of brain researches- based learning due to degree.

The seventh hypothesis: There is no statistically significant difference at ($\alpha \leq 0.05$) level between the study sample responses' means about the knowledge level of brain researches- based learning due to experience years.

The Eighth hypothesis: There is no statistically significant difference at ($\alpha \leq 0.05$) level between the study sample responses' means about the knowledge level of brain researches- based learning due to directorate.

The Ninth hypothesis: There is no correlational relationship between the actual use of the English language teachers of the educational aids and their knowledge level of brain researches-based learning.

1.6 Significance of the study:

This study is significant because it guides the interest of both English language teachers and educationalists toward brain researches-based learning and its importance to choose suitable educational aids for the mental and cognitive abilities among students. Besides, it derives its importance from its suggestions and recommendations, helping the choice makers to develop and improve. Moreover, it presents a research approach for educational reality, which is expected to open new prospects for other studies addressing various aspects not found in the current study.

1.7 Delimitations of the study:

This study is limited to the following limitations:

- 1. Objective limitation:** this study will examine the actual use of the English language teachers' use for educational aids and its relation to their knowledge of brain researches-based learning.
- 2. Spatial limitation:** Hebron Governorate., Directorates of Hebron Governorate.
- 3. Human limitation:** English language teachers in the directorates of Hebron governorate.
- 4. Time limitation:** this study done in the second school semester in the academic year 2020-2021.

1.8 Definition of Terms:

Educational aids: it is the educational materials, devices, and situations that the teacher uses in the educational contact field in a specific way and system

to clarify an idea or interpret mysterious concepts or explain one of the topics to get students to achieve the behavioral objectives (Al Jabali, 2016, p. 9).

Brain researches-based learning: "It is the learning aligned with the way minds learn naturally", and "it away for thinking in the learning process". It is a group of principles, skills, and knowledge base by which we can make choices regarding the learning process (Jensen, 2008, p.4).

English language teacher: is the person who teaches students at (1-12) classrooms the English language as a foreign language.

Chapter Two

Literature Review and Related Studies

2.1 Literature Review

2.1.1 Educational Aids

2.1.2 Brain-based Learning:

2.2 Related Studies:

2.2.1 Studies Related to the Educational Aids:

2.2.2 Studies Related to Brain Based Learning:

2.3 Summary

Chapter Two

Literature Review and Related Studies

2.1 Literature Review

2.1.1 Educational Aids

There is no doubt that teachers play a great role in the process of knowledge dissemination in the teaching and learning profession and this role increases in the 21st century. Teachers depend on different teaching aids and methods that enable them to perform their function of conveying information to the students effectively. Regardless of the age of the learner, the teacher can simplify the acquisition of information in the mind of the learner with the help of these educational aids during the teaching and learning process (Joseph, 2012).

The Education aid is an essential element of the school curriculum. It is defined as everything that is used to achieve a specific goal. Teachers use the educational aid to achieve their educational goal, and it helps to clarify ambiguous ideas, so this facilitates the process of learning for the students, especially if more than one sense is used. Therefore, Educational Aids is developed in terms of its production methods. In the past, it depended on the visual senses, then it developed to address the sense of hearing, then it became audiovisual at the same time, and then a kind of interactive aids appeared with which the learner interacts with sound and image and with the help of modern means of communication. Thus, Educational Aids are older than Educational Technology (Al Rathei', 2018).

Education technology is a new term that is considered as a systematic, systematic method that takes into account all human and non-human resources in designing, implementing, and evaluating the education process for achieving specific goals. However, Educational Aids are anything used in the educational process to achieve the goals with a high degree of master. They include all materials that the teacher uses to deliver the content of the lesson to a group of learners inside or outside the classroom to improve the educational learning process (Al Titi et al., 2018).

The teacher uses some educational aids that facilitate the process of clarifying, linking and coordinating concepts. This is done to impart realism and effectiveness to education and make it meaningful. In addition, these methods may include Audio-Visual Educational Aids, which focus on the learners' sense of hearing and sight (Kundu,2017).

Definition of Educational Aids:

The views of researchers and educators have varied and converged on the definition of the educational aid, and the most prominent of these definitions are:

- "Didactically shaped objects, products of human work, which are used in the teaching process as sources of cognition/learning"(Đurđanović, 2015, p.33).
- "A set of experiences, materials and tools that the teacher uses to convey information to the student's mind, whether inside or outside the classroom, for improving the educational situation in which the student considers the main point" (Al Jabali, 2016, P.9).
- "A set of devices, tools and materials that the teacher uses to improve the learning and educational process, clarify meanings and explain

ideas, train students in skills and inculcate good habits, develop their attitudes, and inculcate values without relying on words, symbols and numbers only to acknowledge the learners of the scientific and educational facts quickly, robustly and at a low cost" (Al Titi et al., 2018, p.14).

- Everything that is used inside or outside the classroom to deliver experiences to the learner" (Al Rathei', 2018, p.13).
- "The tool used by the teacher in a specific educational situation at a specific time to improve the education and learning processes". And it includes "All that facilitates the process of delivering information from the teacher to the students' minds" (Al Ya' koubi, 2018, p. 12).
- "A set of tools such as a book, a picture, a map, or devices such as a DVD or a computer that the teacher uses to improve or activate audiovisual education and develop students' sensory and interactive skills" (Al Hadi, 2018, p. 19).
- "Is an instructional aid (book, chalkboard, and picture), an object (such as a globe, or map or a specimen) or device (such as a DVD or computer) used by a teacher to enhance or enliven classroom instruction" (Kapur, 2018, p. 2).
- Everything that is used by the teacher in the educational process to attract his students to the lesson and make it more interesting, and to empower the educational experience that these students go through and make it a purposeful and direct experience at the same time. (Salama, 2019, P. 18).

Through the previous definitions, we note that educational aids are part of the educational techniques that help transfer knowledge, information and skills from one person to another and in the field of

education from teacher to learner by addressing the largest possible number of senses.

Thus, the researcher can procedurally define Educational Aids as: the tools and methods used by the English language teacher in educational situations, to clarify and explain the ambiguous ideas and concepts while teaching English language courses.

The importance of the education aids:

It is not easy to facilitate the process of learning; therefore, most of the learners depend on their teachers' creativity in conveying the information. Besides, using teaching aids affects the process of teaching adult learners positively because it makes it more interesting and time-saver (Kapur, 2018).

Regardless of the age of the learner, the teacher can simplify the acquisition of information in the mind of the learner with the help of these educational aids during the teaching and learning process. Leonidas, (2015) notices the effect of using toys and objects on developing the brain of a child during the learning process.

The teacher's use of educational aids during teaching children has a great role in attracting their attention, thus increasing their level of understanding and developing their brain. As well as increasing their academic achievement as a result. This is also considered as an evidence that the teacher chose the appropriate educational method that succeeded in attracting students' interest and achieving the desired goal of the educational process (Joseph, 2015).

Fischer & Rose (1998) state that there is an important impact of the positive early experience of the child as it is considered as the foundation

for early lifelong learning and behavior of the child. Besides, it improves the fast development of the children in the system of the school as it allows for constructing a rich nurturing environment for developing the child.

Educational Aids play a prominent role in the success of the educational and learning process, as the educational aids help in achieving the educational goals. Educational Aids also promote sensory perception through sensory experience for students that they provide to the students, and they attract their attention through the liveliness and realism these aids give to the lesson, by making them interested to study, and they stimulate their interest in learning the subject matter. In Addison, it increases their positive participation in the acquisition of experience and develops their ability to meditate, the accuracy of observation, and following scientific thinking to solve the problems. As a result, this leads to improve their quality of learning, to raise their efficiency, and to increase their experiences, which makes them more willing and attractive to learn (Al Titi et al., 2018).

Types of Educational Aids:

The educational aids vary according to multiple classifications, including:

First: Classification of educational aids basing on their relevance to the educational and learning processes. They are divided into three types:

Educational Aids: This term refers to linking the aids to the learning process in all its forms. It is the definition of the educational aids, i.e.: the educational devices, tools and materials that the teacher uses in the classroom to facilitate the process of delivering the educational experiences to the learner easily and clearly.

Learning Aids: This classification is related to the learning process. Learning is defined as: the behavior of the learner resulting from passing through experiences, that do not require going through a process of intended education or teaching. However, it can occur subjectively, where the learner can learn many experiences by himself without the help or the dependence on the teacher. this is through the computer, watching television, listening to tapes, or others.

Educational and learning Aids: It is a result of the link between the learning process and the educational process, as they are a package deal (i.e., two sides of the same coin), and because the educational and learning aid can be used by the teacher and the learner at the same time. This means that the process can be educational and learning in the same situation (Al Titi et al., 2018).

Therefore, it becomes clear that the difference between Educational Aids and Learning Aids is not in the definition only, but it lies in the users of those aids. If the teacher used the educational aids to clarify a particular concept, it is called Educational Aids, whereas if the learner used it personally to gain new experiences himself in or outside the school, it is called Learning Aid.

Second: Classification of educational aids basing on the senses:

The senses play an important role in conveying knowledge to the learner's mind and by which he sees, hears, touches, tastes, or smells. The fewer the number of senses used; the learning becomes less effective. This classification is based on the senses that these aids address and they are divided into three types:

Visual Educational aids:

Devices that are used in the classroom to encourage students to learn and make it more accessible and interesting. They include pictorial symbols, models, clips, samples, maps, pictures, silent and static films, slides and transparencies. Besides, Visual Educational aids are the best tools for making teaching effective and for the best dissemination of knowledge(Shabiralyani et al., 2015).

The importance of visual educational aids lies in: activating the sense of sight of the learners, so they learn in the most suitable temporal and spatial conditions regularly, allowing the learner to benefit from a wide range of learning tools such as: chalkboard, devices, samples, and books, making learning closer to reality and being able to apply concepts, information, principles and theories in similar new situations. This helps in the transmission of the learning effect. Besides, the emergence of the sensory aspect in the direct experience attracts the attention of the learner, as abstract words may be bored because they are not associated with clear meanings or positive activity, and thus the learner remembers what he watches more than he sees (Al Titi et al., 2018).

The most important visual educational aids are:

Realistic observations: The teacher should present different realistic observations, such as presenting an experiment in front of students or presenting a device or samples.

Educational trips: they provide learners with realistic and real experiences that help them understand their environment, strengthen their connection with it, enhance their belonging to their country and nation, and increase their sense of responsibility towards their homeland and its institutions.

Visiting exhibitions and museums: they are of two types; School exhibitions: which show students' production and their various activities, and public exhibitions: embody the local, social, economic, cultural, historical and natural environment, such as museums. Also, there are public exhibitions that highlight scientific, technological, economic, social and cultural progress.

Maps and global balls: It is one of the examples in which line drawings are used to show the surface of the globe or part of it, and to clarify the relationships between the different areas and the features that lie on it using drawing scales and symbols that help to read the map and understand the meaning of the relationships that it highlights (Al Titi et al., 2018 Abu Sarhan, 2017; Shabiralyani et al., 2015).

Audio Educational aids: Educational materials and tools that the teacher uses to address students' sense of hearing to provide them with an audible educational experience. These aids play an important role in motivating the learner, attracting attention, highlighting the main ideas of the lesson, enhancing understanding of content easily and smoothly, and increasing retention (Maniruzzaman, 2008).

The most important Audio Educational aids are:

Radio (broadcasting): It is one of the most important and widespread and least expensive aids of mass communication. The advantages of this aid are: The low costs of producing and receiving the audible radio programs, the emotional impact of the radio programs through directing the program and the use of soundtracks and sound effects that attract the listener and his eagerness to follow up on the programs.

Sound recordings: It is defined as the process of keeping and storing sounds in different ways and by using various devices. This is to re-hear

it when the need arises. The audio recordings are divided into: gramophone, open-reel recorders, cassette recorders, audio cards, and mini-cassette recorders.

There are many examples for audio recording including: recording stories and texts prescribed in the curriculum, educational radio programs, teaching and training in the languages, especially the Arabic and English language laboratories, addressing some of the students' speech defects and training them, listening to songs, stories and music, and enhancing the work of some fixed-film projectors such as slides. (Al Titi, 2018 & Maniruzzaman, 2008)

Audio-Visual Educational Aids: It is the educational aids that focus on both senses of hearing and sight together. The importance of this type of educational aids is that it contributes to encouraging participation, stimulating interest, allocating instruction, acting as a source of information, and learning on the basis of sensory experience through eyes, ear and touch (Ngozi et al., 2012).

The most important Audio-visual Educational aids are:

Television: It is used in the field of education by preparing specific systematic educational programs to achieve educational goals for the various educational levels. It is used as an aid to the teacher in communicating and clarifying information to the learners.

Video: it is considered as one of the devices used in educational technology because of the multiple qualities that make it take this role. This because it is an Audio-visual aid for communication and education, presenting different techniques (visual, auditory, musical, colors) in addition to the possibility of implementing various teaching strategies that stimulate learners' motivation. This helps in the emergence of

positive attitudes towards the scientific material, which works on innovation and creativity, in addition to achieving the principle of effective education that provides learners with various motivations. Then, we leave the field to record the learner's response and provide the feedback, achieving the principle of linking the theoretical side with the practical side, which is an essential function of using video in the educational process as a means of presenting and observing the applied processes, providing new information to the learners, and contributing to the consolidation of the information, skills and attitudes acquired by the learners (Al Titi, 2018; Ashaver & Igyuve, 2013).

Third: Classification of educational aids basing on technological approach (Kundu, 2017, P. 248):

Simple hardware: Magic lantern, epidiascope, slide projectors, filmstrip projectors, opaque projectors and overhead projector, etc.

Hardware: Radio, television, radio-vision, telelecture, records player, tape recorder, motion pictures, teaching machines, and computer.

Software: Slides and filmstrips, pictures and other printed material, graphic aids such as graphs, charts, maps, diagrams, cartoons and posters and three-dimensional objects like models and specimens.

Criteria for choosing appropriate teaching method for an educational situation

When choosing an educational aid, it is necessary to know if it is suitable for the educational situation in which it will be used or not. This will be through: determining the behavioral goals of the lesson, arranging the behavioral goals according to the educational outcomes that they represent, determining the characteristics of the required teaching aids,

analyzing the characteristics of the learners, determining the characteristics of the educational environment, preparing a list of appropriate educational aids, identifying the scientific obstacles that affect the use of these aids, choosing the mean after use, and evaluating the mean after use (Al Ebidani, 2009).

In light of what has been mentioned above, the researcher concludes that Educational Aids are of great importance in stimulating the student's interest, satisfying his learning needs, expanding his experiences, developing his ability to meditate and accurate observation, following scientific thinking, modifying their behavior and forming new attitudes for them if it is presented in an exciting and attractive way. It helps in the participation of all the senses of the learner in the educational processes, which leads to the consolidation and deepening of concepts, and the survival of the learning effect.

2.1.2 Brain-based Learning:

The theory of Brain-based Learning is one of the modern theories that have been used in the learning process, which showed a vital role for the brain in human learning his acquisition of various sciences and experiences, and which has many effects in various educational fields. This theory states that each side of the brain has its own mental processes that differ from one side to the other (Nwafala & Hindasi, 2014).

The right hemisphere of the brain is concerned with reconstructing and assembling parts to form them in an integrated manner and recognizing the relationships between the separate parts. Besides, it is the aspect that deals with drawings, imagination and creativity, as it does not move in a linear manner, but rather in a compatible and parallel manner. It also can deal with several topics at the same time, it understands patterns, verbal

images, perceptions and fantasies, it distinguishes complex shapes, it is driven by emotions, it confronts problems in a non-serious way, and it prefers works that require abstract thinking.

While the left hemisphere is concerned with the analysis process, logic and numbers, and it helps the individual to use language for reminders, sensory analysis, sequential linear processes, recognizing familiar objects, and focusing on parts and detail. Moreover, it is the most logical and effective aspect in processing verbal and digital materials and time-related processes. This hemisphere can face new problems, and focus on one work always. It also prefers activities that require research, exploration and organized work.

The individual tends to use the distinctive thinking and learning methods of both the left and right hemispheres of the brain equally. Although the two halves perform different functions, there are functions that one of the two halves that can perform this function better than the other half. The concept of control is used to express the division of roles between the two halves. This concept is defined as it is intended that the nerve centers located in one of the two halves are more active and influencing in the individual's behavior than the other (Arun & Singaravelu, 2018; Abd Al Hussain, 2015; Nwafala & Hindasi, 2014).

The theory of Brain-based Learning emerged as a result of the efforts of psychologists such as Caine and Caine, Guinness, Sylvester, Sousa, and Dolph by relying on the results of brain research, computer science and information processing, to improve the teaching and learning processes in the hope that the learner will be better to face the requirements of the third millennium. (Yousif, 2010).

Brain-based Learning is defined as “learning compatible with how minds learn naturally, and it is a way of thinking about the learning process”. Moreover, it is “a set of principles and skills, which is the knowledge base through which we can make decisions about the learning process” (Jensen, 2008, p. 4). Al Tawil (2016) agrees with this view as he believes that Brain-based Learning is "a general framework for thinking, teaching and learning for the development of thinking and learning." (Tawil, 2016).

Afaneh (2013, P. 10) defines it as: "a set of educational activities and steps taken by the teacher, based on the assumptions of the learning theory of the two-sided brain, which includes the teaching and learning processes."

Finally, Ahmed (2014, P. 217) states that: Brain-based Learning is “the mental processes represented in the reception and production of knowledge based on the functional integration of the two hemispheres of the brain together in the study room.” Abdullah et al. (2016, P. 221) agree with this view as they believe that it is “a method of learning based on the activation the two sides of the brain, which the student uses based on his functions that is responsible for verbal and nonverbal language, sensations, feelings, emotions, and various behaviors to reach a better understanding of the learning process".

Despite the variation in the opinions of researchers on the concept of Brain-based learning, they agreed that it is a method based on activating the two sides of the brain equally and employing knowledge of how the brain works in improving the educational and learning process.

Therefore, the researcher defines Brain-based Learning procedurally as: a set of educational steps based on the principles of brain-based learning

theory, adopted by the English language teacher, and that includes the teaching and learning processes.

Principles of Brain-based Learning:

In 1991, Caine and Caine developed twelve principles that are applied to the function of the brain in the educational learning process. These principles are, as mentioned in (Ramakrishnan & Annakodi, 2013), as follows:

- The brain is a parallel processor. This means that it can perform many activities simultaneously.
- Learning is interested in the entire physiology. As effective learning depends largely on the individual's understanding of their unique mental structure, and how its functions are used effectively during the learning process.
- Searching for meaning is innate. The brain tends by its innate nature to search for meaning in the information and facts presented to it.
- The brain searches for meaning through coding. The search for meaning occurs with the information and facts presented to the brain at the simple cellular level through coding. As every nerve cell present in the brain is basically associated with the next nerve cell, and such cells send their signals and interact together continuously. Therefore, this increases the interconnection of ideas, and the relationships between them as a result of such interaction.
- The brain performs cognitive and non-cognitive processes. This is due to that Brain-based Learning occurs through diversification and

enrichment of the learning environment, and it contributes to attracting learners' attention and stimulating their brains.

- It processes the brain completely and partially at the same time. One of the most important characteristics of the brain cortex is the ability to notice and find patterns specific to meaning. This process includes decoding codes, signs, and understanding the relationships and the information of the content. Besides, the brain understands signals and information in a complete way, not in a linear sequential form.
- Learning includes the concentration of attention and Cognition: the human brain is naturally inclined to specific motivations. It is not designed to pay attention to all kinds of data consciously, as it works and pays enough attention to be survived.
- Learning includes both conscious and unconscious processes. The human brain can process information unintentionally or through the subconscious state of mind. This process enhances metacognition that encourages the promotion of higher levels of thinking.
- We have (at least) two types of memory systems: fixed and spatial memory: the human brain organizes and stores information based on how and how much it is present in the context or content. In addition, also, there is no single region responsible for memory alone, as most memories are equally spread across the cortex.
- Education is developed and ongoing through skills and facts. The human brain is flexible and constantly changing lifelong.
- Learning is enhanced by challenge and prevented by embarrassment and threat. Situations of threat, fear and embarrassment make the brain in a state of alert. This causes an increase in the production of certain hormones that lead to the death of the brain cells, thus changing its way of thinking. This hinders the normal functioning of the brain and affects the level of learning.

- Each brain is organized uniquely and distinctly. The human brain differs from one person to another because genetics and life experiences play a role in the formation of the brain as a unique and distinct organ.

Stages of Learning Basing on Brain-based Learning Theory:

By analyzing the theory of Brain-based Learning, according to the concept of learning, the principles of the theory and its importance, and the stages of the brain learning process, a set of foundations and directions were achieved that have been transformed into stages, steps and teaching procedures based on the nature of the brain's function, and the different function of its hemispheres. The following is an explanation of the stages of teaching according to the theory of Brain-based Learning:

The first stage: preparation for the learning process: This stage includes preparing students' brains for the issue of the lesson, preparing them for the process of learning, and stimulating and motivating their thinking by activating their previous experiences and linking them to the new issue of the lesson.

The second stage: integration and expansion in studying the issue of the lesson: This stage aims to guide students to go deeper into the study of the issue of the lesson, to identify its various dimensions, and to link its multiple aspects in a way that helps them in determining the relationships between ideas, reach logical conclusions, and link the causes and consequences related to the issue and its interpretation.

The third stage: the active processing of information: This stage includes practicing some processes that would change and amend the acquired information. After the interaction with the information occurred in the previous stage, and after understanding this

information and forming relationships and interconnections with it, the active processing stage comes to make the brain exercises the processes that treat, change, and modify the information in line with the functions of the brain.

The fourth stage: memory formation and functional integration:

Memory formation is the process of training students to keep what was gained during the previous stages in the memory for a longer period. However, functional integration means training students to apply what they learned during the lesson in educational and real life situations (Al Nashar, 2018).

Brain-based Learning: a tool for meaningful learning:

Students learn cognitive skills based on Brain-based Learning through meaningful learning strategies. Brain-based Learning learners can use throughout their life. These cognitive skills can be used in their everyday experiences and these skills can be developed through Brain-based Learning. Thus, students can evaluate, analyze, remember and make comparisons by themselves. In other words, Brain-based Learning is used as a tool for meaningful learning that is an effective way for engaging the students in the learning process.

Moreover, this kind of learning is connected with neurology and the science of education, especially in educational psychology. Learners and teachers depend on Neuroeducation in the classroom as a basic scientific tool as it is designed to identify academic failures and to understand children's main cognitive functions.

Most importantly, brain-based learning is a constructivist approach of teaching method in which the brain constructing the learning process

through associating knowledge with previous experiences. Constructivism defines learning as an interior process that occurs in the mind of the individual, and it is not common for everyone.

Teachers' Role Basing on The Theory of Brain-based Learning:

The teacher is the leader of the educational and learning process. This is due to that the teacher helps students to acquire and master skills and to fully understand ideas, concepts and generalizations. Therefore, we can depict the teacher's role basing on the theory of Brain-based learning as follows:

- exploring the characteristics of each learner, and recognizing the suitable learning styles and methods of each learner.
- Creating a suitable environment in the classroom for teamwork, in which the acquired experiences create social interaction and respect for others.
- Providing students with the opportunity to analyze and synthesize. Thus, the learner acquires the skills of critical thinking through discussion, individual work and teamwork.
- Discovering and expanding the audio-visual capabilities of learners. Because showing figures, drawings, images, and verbal information provides a better chance for the success of learners who rely on visual treatments in their learning. Thus, this helps them in the processes of mental representation, and the formation of sensory mental images.
- Providing an opportunity for brainstorming and intellectual alertness. Therefore, learners can use their brains to discover the external environment and stimulate the desired learning (Agha, 2017).
- Encouraging students to express their ideas, experiences, and previous information about the subject of the lesson, and sharing these ideas

and information among them. This is for linking the previous experiences of their cognitive structure with the new experiences related to the subject of the lesson. Therefore, this helps in the process of building meaning in students' brains regarding the issue of the lesson, and their learning process in general.

- Improving students' learning process by activating the work of the two hemispheres of their brains: the right and the left. As each of them performs different operations that are specific to it. The brain improves whenever the learner is exposed to educational situations and experiences that deal with both hemispheres together, and the information provided varies between parts, details, and generalizations (Al Nashar, 2018).

Therefore, the researcher concludes that learners differ in the structure of their brain, their abilities, and their experiences. Accordingly; the teacher must consider these factors when choosing the appropriate teaching method so that its content and activities should be suitable for the pupils' thoughts, experiences, and mental and cognitive abilities. This is to achieve the intended goal of using educational aid. In addition, the success of the educational situation depends primarily on its achievement of the planned goals, which depends on the teacher's good choice of the educational aids that facilitate the process of achieving those goals. To sum up, the teacher must take into consideration the criteria for choosing the educational aid.

2.2 Related Studies:

The researcher presented a number of previous studies related to the study topic (The reality of Using the English Language Teachers' in

Hebron Directorate for the Educational Aids and its Relationship to their Knowledge of Brain Researches Based Learning). Then, the researcher analyzed them to make a comparison with the current study by recognizing the similarities and differences among them as well as getting their uses in the current study. The researcher presented the previous studies downward from the most recent to the oldest and divided into two sections as follows:

2.2.1 Studies Related to the Educational Aids:

The purpose of Milod (2018) is to identify the reality of using educational aids in teaching physical and sports education at the medium education. The research adopted the survey-descriptive approach to achieve the study purposes and used a questionnaire to collect the preliminary data of the study sample. The sample consisted of (30) male teachers purposively chosen out of the study population, representing all the male teachers of physical and sports education at the medium education in the educational institutions of Tiaret state. As the results showed, there is a difficulty in the availability of the educational aids as well as various difficulties in using them.

As for Billa and Adam (2017), it investigated the degree of using skills for educational aids among kindergarten's female teachers from the perspectives of female supervisors. As the researcher used the analyticAl descriptive approach, a sample of (298) female teachers filled a questionnaire. This sample was randomly chosen from the female teachers of the kindergarten level in Al Jazeera east in the academic year 2016/2017. The questionnaire was filled up by female supervisors in terms of the teachers' lesson evaluation reality. In light of the study results, the skills of using educational aids have been highly found among female teachers of the kindergarten level. The results also showed that

there is no statistically significant difference between the female teachers in the verification degree of skills of educational aids due to the type of kindergarten (public, private). Moreover, there is a statistically significant difference in the verification degree of educational aids skills due to the following variables; school place (city, countryside) in favor of the city, the highest degree, and the greatest practical experience of a female teacher.

Younis (2017) aimed at recognizing the reality of the educational aids' use in the Arabic high schools in Chad. As the analytical descriptive approach was adopted, (110) female and male teachers filled a questionnaire to gather the preliminary data. The researcher randomly chose the study sample out of the study population, consisting of all the female and male high school teachers in Chad. The results indicated that the Arabic high schools in Anjemina lack the most important required educational aids. They also showed that teacher is aware of the necessity of using the educational aids in teaching. Various difficulties also hinder the availability of educational aids in Arabic high schools.

Ali (2016) evaluated the impact of using educational aids in teaching arts. To achieve the study aim, the researcher followed the descriptive approach using a questionnaire as the study instrument to gather the preliminary data. The study sample included (83) male teachers randomly selected out of the study population that contain all the female and male art teachers at the elementary schools in the Diyala governorate. The outcomes showed low use of the educational aids by the female and male teachers in the art lessons due to the limited availability of these aids in schools. On the other hand, the researcher attributed this result to ignoring the art subject in general in a lot of schools because of integrating more than one school into one building.

Rajam (2016) investigated the reality of using educational aids in teaching the Arabic language at the primary level and its relationship to activating class communication. As adopting the descriptive approach, the study instrument used was the questionnaire. It is applied to a random sample consisting of (103) teachers. The study sample represented all the teachers of primary education in Cusstantin state. The results indicated that teachers are largely agreed with the importance of educational aids and their necessity to activate class communication. Besides, the board, the schoolbook, pictures, and stories are the most educational aids used in teaching.

The purpose of Fidelia (2015) is to determine the educational materials used to enhance writing essays at secondary schools in Eibouni state. Since the teacher adopted the analyticAl descriptive approach, a scale was applied to a random sample of (249) female and male teachers selected out teachers of the English language, literature, and the French language. The study results showed that most educational aids are not available at schools, and most teachers neither teach writing essays nor use educational aids. According to the study findings, there is no difference between a female and male teacher in applying the educational aids in teaching essay writing.

Othman (2015) aimed to recognize the reality of using educational aids in the educational process at the secondary stage. It also aimed to discover the obstacles that hinder using them and the teachers' attitudes toward them. This research adopted the descriptive approach to achieve the aim of the study. Then, the researcher collected the preliminary data via a questionnaire. A random sample of (40) female and male teachers was selected from the study population, including all the female and male teachers of the secondary stage in Dubba locality in the north state. As the

outcomes indicated, a number of obstacles hinder the use of educational aids. The attitudes of the female and male teachers toward using the educational aids were positive.

Suliman (2015) investigated the role of educational aids in improving academic achievement among seventh-graders in basic education in Sudan. After adopting the descriptive approach, the researcher used a questionnaire to collect the preliminary data. Then, the researcher picked a random sample of (100) female and male teachers to represent all basic education teachers in the Karari locality. The findings of the study showed that the educational institutions' duty bearers ignore the educational aids. Besides, there is no attention given to the training courses on using the educational aids and their production. The teachers are not aware of the educational aids use to improve the students' abilities. Moreover, there is no private attention on the educational uses of the educational aids in preparing and training the teachers.

Al Hassan and Al Tayyeb (2011) revealed the reality of educational aids and the necessity of their use in teaching the course "Science in our life" for the seventh grade of the basic education at Karari locality in Al Khartoum state. The researcher adopted the descriptive approach to achieve the study aims. A questionnaire is the study instrument used to collect the preliminary data from (82) female and male teachers, representing the study sample. Those teachers were randomly chosen from the population of the study that includes all the female and male teachers of the seventh grade at Karari locality in Al Khartoum state. The study findings showed a high degree of the teachers' awareness toward the importance of using educational aids in teaching "Science in our life". It also showed the non-existence of significant statistical differences between the responses of the study subjects about the importance of the

educational aids' use due to the variables (gender, scientific qualification, experience years).

Al Ne'ma and Dawoud (2017) aimed at revealing the reality of the educational aids and games in kindergarten. Since this research is descriptive, the researchers used a questionnaire to gather the preliminary data from the study sample, including (17) kindergartens. A stratified random sample represented all the kindergartens at the center of the Ninwi governorate. The study findings indicated low use of the educational aids and games in kindergarten due to the circumstances the Iraqi country goes across. Besides, specific material resources that afford these aids and games are not available. Furthermore, the kindergarten departments do not pay attention to buy and afford some aids and games that benefit children in this stage of life.

2.2.2 Studies Related to Brain-Based Learning:

Oduro-Bediako (2019) aimed to predict the teachers' visions in all the teaching levels about brain-based learning and their teaching practices through (teaching experience years, gender, knowledge, recognition). The researchers adopted the correlational descriptive approach for achieving the study aims and applied a questionnaire for gathering the preliminary data from the study sample. The study sample consists of (422) teachers randomly selected from the study population, representing all (K-12) teachers within the system of the public schools in the United States. As the outcomes showed, the practice implementations of brain-based learning could be strongly predicted through knowledge and recognition. In addition, teaching experience years and gender did not predict (K-12) teachers' application of brain-based learning practices in the class.

Al Shaibani (2019) endeavored to reveal the level of knowledge and application of principles for brain-based learning among secondary female teachers in AL Ta'if city. The research adopted the survey-descriptive approach since the researcher prepared a questionnaire to gather the preliminary data from (272) female teachers. The researcher used random sampling to represent all the secondary female teachers. In terms of the study results, there is a decrease in the knowledge level of the brain-based learning principles among female teachers. On the other hand, there is a decrease in the application level of brain-based learning principles. Besides, female teachers with scientific disciplines have a higher knowledge level of brain-based learning principles compared to humanities female teachers. Moreover, the experience and major have no impact on the application of the brain-based learning principles.

Al Anzi (2019) aimed to discover the most and least common teaching practices among the teaching staff in the north borders university in terms of the theory of brain-based learning. As the study adopted the survey-descriptive approach, (199) female and male teaching members in the university filled the study instrument (questionnaire). The study findings appeared that the most common practice is developing an encouraging and supportive environment inside the classroom whereas the least common practice is using natural music sounds to get students ready for learning. The study showed significant differences for the practices "I give my students the permission to test their wrong answers to get the right ones" and "I motivate my students to develop real aims for themselves" in favor of males. And there is a statistically significant difference between the teaching staff in practicing: "I provide the students with the chances to analyze, synthesize, and evaluate the learned material inside the classroom" due to the scientific degree variable in favor of

master holders. Besides, there is a statistically significant difference between the teaching staff in practicing "I change the activities inside the classroom every 20 minutes" and "I motivate students to develop real aims for themselves" due to the college variable in favor of the scientific colleges. Furthermore, the results showed statistically significant differences between the teaching staff in practicing "I urge to set an appropriate class environment for students" due to the experience years variable in favor of the most recent experienced members ranging (5-10) years.

The purpose of Fozia (2017) is to discover the university teachers' position of brain-based learning and its impact on motivating undergraduates. As the research adopted the descriptive approach to achieve the study aims, the researcher assigned the questionnaire as the study instrument to gather data. The researcher chose two random samples; the first sample was (311) teachers and the second sample was (622) teachers from state and private universities in Islamabad. According to the findings, teachers rarely practice a positive position toward brain-based learning and this position is strongly connected to students' motivation.

Shahrouri & Jabara (2015) investigated the extent to which brain-based learning is effective in training students in the solving-problem method at the schools of Ha'il region in the Saudi Arabia Kingdom. As an analytical descriptive study, the researcher developed a questionnaire in terms of the study aims and applied it to a random sample, consisting of (370) female and male teachers who teach science at the state schools in the Ha'il region for the academic year 2012-2013. In terms of the study results, there is a statistically significant difference between the teachers' points of view about the efficacy of brain-based learning strategy used to train

students in solving problems due to gender in favor of female teachers. It also indicated a statistically significant difference due to the experience variable in favor of the experiences with more than five years. Moreover, there is a statistically significant difference due to the scientific qualification in favor of master holders.

The purpose of Hasanein (2014) is to determine the extent of the Arabic language teachers' practice for the teaching skills in terms of brain researches results-based learning in literacy classes. In compliance with the study aims, the researcher used the descriptive and exploratory approach using a questionnaire to collect the preliminary data from the sample of the study. The researcher selected (130) random female and male teachers from the Arabic language teachers in literacy classes. The study findings showed that there is a statistically significant difference between the sample subjects' degrees in relating to the degree of the Arabic language teachers' practice for the teaching skills in terms of brain research-based learning due to the experience variable in favor of the group "more than 5 years' experience". There is also a statistically significant difference between the sample subjects' degrees in relating to the degree of the Arabic language teachers' practice for the teaching skills in terms of brain research-based learning due to the scientific qualification variable in favor of "high qualification and over".

The purpose of Mansy (2014) is to acknowledge the (K-12) teachers' visions and their practices for the strategies of brain-based learning in teaching science. As survey-descriptive research, a questionnaire is used to gather the data from (216) subjects randomly selected to represent all full-time teachers in schools of north-east Tennessee state. As findings appeared, teachers' visions are positively connected to their self-practices. Besides, there is a statistically significant difference between the means

of study sample responses about practicing the strategies of brain-based learning due to gender variable in favor of females.

Kapadia (2014) aimed at revealing the beliefs of schoolteachers in the greater Mumbai area about the practices of brain-based learning. In the light of achieving the study aims, the researcher adopted the survey-descriptive approach using a questionnaire as the study instrument. A total of (350) teachers were randomly chosen to represent the study population, including all the teachers teaching in schools of the greater Mumbai area. The study revealed that teachers have a high level of knowledge about brain-based learning. Teachers also have a medium level of belief about brain-based learning. Likewise, teachers largely practice brain-based teaching.

Siercks (2012) aims to recognize the extent to which teachers of basic education are aware of the brain-based teaching strategies. The researcher applied a questionnaire to gather the preliminary data since the research adopted a qualitative approach. The study purposive sample included (16) female and male teachers, ranging in age from 21 to 51 years. At the end of the study, it is clear that movement integration into lessons is the most common strategy teachers consider as a brain-based strategy. Moreover, very few teachers use brain-based visual aids during oral lecture.

2.3 Summary

The researcher presented (10) studies related to educational aids and (10) studies related to brain-based learning. Then, the researcher analyzed them in terms of aim, adopted approach, data collection instrument, study population and sample, and studies' results.

All the previous studies of the first instrument and the current study agreed on studying the reality of the use of educational aids, except

Suliman (2015) that aimed to investigate the role of educational aids in developing teaching achievement among seventh-graders in basic education in Sudan.

All the previous studies related to the second instrument and the current study agreed on measuring the teachers' knowledge of brain-based learning, for example, Soduro-Bediako (2019), Al Shaibani (2019), and Kapadia (2014).

All the previous studies of the first and second instruments and the current study agreed on adopting the descriptive approach to achieve the study aims and using the questionnaire as an instrument to collect the preliminary data.

All the previous studies and the current study agreed on targeting teachers' population in several teaching levels, except one study in the first instrument, which is Al Ne'ma and Dawoud (2007), targeting the department of kindergartens, and another study in the second instrument which is Al Anzi (2019), targeting the teaching staff in north borders university.

The previous studies varied in presenting the study population since some used the random sample method such as Billa and Adam (2017), Yunis (2017), Ali (2016), Rajam (2016), Othman (2015), Suliman (2015), Al Hassan & Al Tayyeb (2011), Ouro-Bediako (2019), Al Shaibani (2019), Al Kumi & Elan (2019), Fowzia (2017), Shahroui & Jibara (2015), Hasanien (2014), and Mansi (2014). On contrary, some studies used the purposive method such as Milod (2018) and Siercks (2012). As for Al Anzi (2019), it used the complete survey method. As for Al Ne'ma & Dawoud (2007), they agreed with the current study on using stratified random sampling to represent the study population.

The current study has been characterized from the previous studies since it aimed at revealing the reality of educational aids use and its relationship to the knowledge of brain researches-based learning. Researchers have not previously studied the relationship between these two variables –as far as the researcher knows- locally, regionally, or internationally.

The researcher benefited from the previous studies in determining the statement of the problem and enriching the literature review with field findings. It also helped the researcher to determine the questionnaire fields and instruments and acknowledge the validity and reliability methods. Further, these studies will enable the researcher to choose the appropriate statistical methods of data analysis after the study's practical application and to collect data from the study sample.

Chapter Three

Method and Procedures

3.1 Methodology

3.2 population of the Study

3.3 Sample of the Study

3.4 Study Tool:

3.5 Statistical methods used in the study

Chapter Three

Methods and Procedures

This study aimed to identify the use of educational aids by Teachers of English in the Hebron Governorate and its relationship to their knowledge of brain-based learning. In this chapter, the researcher touched upon the methodology used in the study, the targeted population and its representative sample, and the tools used to collect primary data from the study sample, the methods for verifying its validity and reliability, the procedures of its application, and statistical processing used to analyze data and then to extract the results.

3.1 Methodology

The researcher used the descriptive approach to achieve the aim of this study since it is one of the analyses organizing scientific explanation forms to describe a phenomenon or a specific problem. This approach visualizes the issue quantitatively through data collection, codified information about the phenomenon or the problem, its classification, analysis, and subjecting it to an accurate study.

3.2 Population of the Study:

The study population consisted of all English language teachers in the directorates of Hebron Governorate. Because of the current conditions following the Covid-19 pandemic and the consequent closure of schools, the researcher applied the study electronically via Google Forms, by sending the electronic link of the questionnaire to all members of the study population, and it was available for (21) days.

3.3 Sample of the Study:

The researcher collected (168) questionnaire forms that are valid for statistical treatment. Thus, the characteristics of the study sample were determined as follows:

Table (3.1) Distribution of the study sample of teachers of English in Hebron directorate

Variable	Description	Frequency	Percentage
Gender	Male	104	61.9
	Female	64	38.1
Academic Qualification	Diploma	9	5.4
	Bachelor	135	80.4
	Postgraduate	24	14.3
Years of Experience	Less than 5 years	30	17.9
	From 5 to less than 10 years	32	19.0
	From 10 to less than 15 years	47	28.0
	More than 15 years	59	35.1
Directorate	South Hebron	43	25.6
	North Hebron	70	41.7
	Downtown Hebron	9	5.4
	Yatta	46	27.4
Total		168	100%

3.4 Study instruments:

To achieve the aim of the study that is to identify the use of educational aids by Teachers of English in Hebron Governorate and its relationship to their knowledge of brain-based learning, the researcher used the questionnaire as a tool to collect primary data from the study sample (Appendix No. 3), based on the previous educational literature. Such studies: Othman (2015), Al Ne'ma and Dawoud (2017), Al Shaibani (2019) & Al Anzi (2019). The phrases were formulated clearly, without ambiguity, and they are precisely defined in words appropriate to the category of male and female teachers.

The questionnaire was formed in its initial form of (54) items distributed on two main instruments:

- The use of educational aids by Teachers of English in Hebron Governorate, including three sub-domains, which are:
 - a) Educational aids preparation.
 - b) Using the educational aids.
 - c) Evaluation
- English teacher's knowledge of brain-based learning in Hebron Governorate.

Determining the way of correcting the questionnaire:

- The Five-Point Likert scale was used to collect the responses of the study sample from the teachers on the first instrument (the use of educational aids by Teachers of English in Hebron Governorate). The scale consists of five levels, ranging from the very low-level corresponding to the quantitative assessment (1) to the very high-level corresponding to the quantitative assessment (5).
- The Three-Point Likert scale was used to collect the responses of the study sample from the teachers on the second instrument (English teacher's knowledge of brain-based learning in Hebron Governorate). The scale consists of three levels, ranging from the level of weak knowledge corresponding to the quantitative assessment (1) to the level of high knowledge corresponds to a quantitative assessment (3).

Instrument Validity:

It means that the questionnaire measures what it has set to measure, i.e., the use of educational aids by Teachers of English in the Hebron Governorate and its relationship to their knowledge of brain-based learning. The validity of the questionnaire was verified by the following methods:

- **Interrater Validity:**

The questionnaire was presented in its initial form to 11 referees in the field of (English language and teaching methods), and the experts suggested amending the wording of some items. All the required amendments were done, and thus the questionnaire became complete with (53) item.

- **Internal Consistency Validity:**

It means that there is a direct correlation relationship of statistical significance between each of the questionnaire items with the total degree of the instrument to which the item belongs. The correlation coefficient was calculated for the survey sample data of (39) teachers. Table (3.5) shows the results of validity of the internal consistency:

a) Internal Consistency Validity of the instrument of (the use of educational aids by Teachers of English in Hebron Governorate):

Table (3.5) Correlation coefficients between the items of the instrument of (the use of educational aids by Teachers of English in Hebron Governorate) and the total degree of the instrument

No.	Item	Correlation Coefficients
1.	I think about the purposes that the aid will achieve.	0.911**
2.	I choose the appropriate educational aid for the subject of learning.	0.901**
3.	I take into account the individual differences between students when choosing an educational aid.	0.920**
4.	I take into account the financial capabilities available to the school when choosing an educational aid.	0.876**
5.	I choose the educational aid according to the	0.912**

No.	Item	Correlation Coefficients
	time specified for the class.	
6.	I recognize the educational aid in terms of content, characteristics, and suitability to the subject and objectives of the lesson.	0.919**
7.	I recognize the educational aid in terms of content, characteristics, and its suitability to the learners' previous experiences	0.939**
8.	I try the chosen educational aid several times before using it during the class.	0.863**
9.	I plan to use the aid in light of the objectives to be achieved.	0.858**
10.	I prepare students' minds to use the aid so that they have a background about its topic.	0.880**
11.	I prepare students' minds to use the aid so that they have a background about its objectives.	0.893**
12.	Explain to the students how they will benefit from the aid in developing their previous experiences.	0.884**
13.	I prepare the space in a way that helps the chosen aid to be used So that it performs the intended benefit	0.958**
14.	I explain the purpose of the educational aids at each step during the lesson.	0.944**
15.	I make sure that the aid used is didactic.	0.935**
16.	I involve students in planning the lesson, to achieve clear goals in their minds by the aid.	0.912**
17.	I make sure to involve students in choosing the educational aid.	0.843**
18.	I vary in the use of educational and learning aids to take into account individual differences between the learners.	0.944**
19.	I show exciting visual images to capture students' attention and interest.	0.918**
20. 20	I have my students listen to audio recordings to stimulate their curiosity and attention.	0.874**
21.	I show lesson objectives on the chalkboard.	0.700**
22.	I make sure that I use the educational aid at the appropriate time.	0.941**
23.	I divide students into groups when presenting the educational aid.	0.799**
24.	I make sure to involve students in evaluating the educational aid that was used.	0.926**
25.	I make sure that the educational aid reflects its	0.943**

No.	Item	Correlation Coefficients
	idea clearly and truly.	
26.	I make sure that the educational aid has increased learners' understanding of the topic of the lesson	0.971**
27.	I check the scientific validity of the educational aid.	0.945**
28.	I make sure that the educational aid used is appropriate for the students' age group.	0.940**
29.	I investigate whether the educational aid is worth the time and effort spent in developing and using it.	0.957**
30.	I make sure that I take into account the individual differences of students when preparing and using the educational aid.	0.957**
31.	I make sure that the educational aid is appropriate for the learner's preferences, attitudes and skills.	0.947**
32.	I evaluate if the students have benefited from the educational aid, and the extent to which it has achieved the objectives of the lesson.	0.967**
33.	The process of evaluating the educational aid helps me in improving its use in the coming times.	0.958**

* The correlation coefficient is statistically significant at the level of significance (0.05).

** The correlation coefficient is statistically significant at a significance level (0.01).

Table (3.5) shows that all the correlation coefficients are statistically significant at the level of significance (0.05), as the correlation coefficients ranged between (0.70 - 0.97). Therefore, this indicates the presence of a strong direct correlation confirming the existence of the internal consistency between the items of the instrument of (the use of educational aids by Teachers of English in Hebron Governorate) and its total degree.

- b) The internal consistency validity of the instrument of (English teacher's knowledge of brain-based learning in Hebron Governorate):

Table (3.6) The correlation coefficients between the items of the instrument of (English teacher's knowledge of brain-based learning in Hebron Governorate) and the total degree of the instrument

No.	Item	Correlation Coefficients
1.	Students' learning method plays an important role in the educational environment.	0.481**
2.	The learning process happens through many parts of the two sides of the brain interact together, and the occurrence of a complex operational link.	0.592**
3.	The learning process occurs when there is an excitatory to the brain.	0.501**
4.	The silent reading activates the frontal lobes of the brain.	0.352*
5.	During the process of distinguishing between words and processing information, there is a complex interaction occurs between the two sides of the brain.	0.442**
6.	The brain is characterized by its ability to discover, understand and determine meanings.	0.425**
7.	The processes of learning and remembering are closely related and cannot be isolated, as each affects and is affected by the other process.	0.566**
8.	Effective learning depends mainly on the extent to which the individual understands his/her unique mental structure.	0.390*
9.	Diversification and enrichment of the learning environment contribute to attracting learners' attention and stimulating their brains.	0.385*
10.	The human brain is characterized by its flexibility and constant change throughout life.	0.621**
11.	Situations of threat, fear, and embarrassment put the brain in a state of alert.	0.512**
12.	The human brain differs from one person to another.	0.437**
13.	The left and right sides of the brain improve as the learner encounters new learning situations and experiences.	0.441**
14.	The learner's brain loses the required meaning if the educational experiences that the learner encounters are below or above his/her level.	0.360*
15.	The brain grows and develops by interacting and cooperating with others.	0.348*
16.	Brain capacity improves as the learner becomes more mature.	0.452**
17.	The brain can model experiences to facilitate understanding and perception of meaning.	0.371*
18.	Every learner is distinguished from others in the formation of his brain, experiences, capabilities, and capacity.	0.586**
19.	The right side of the brain deals with visual situations.	0.489**

No.	Item	Correlation Coefficients
20.	The left side of the brain deals with the time required to complete a task.	0.531**
21.	The learner can deal with all educational situations.	0.527**

*The correlation coefficient is statistically significant at a level of significance (0.05).

** The correlation coefficient is statistically significant at a level of significance (0.01).

It is clear from Table (3.6) that all the correlation coefficients are statistically significant at the level of significance (0.05), as the correlation coefficients ranged between (0.348 - 0.621). This indicates that there is a strong direct correlation confirming the existence of the internal consistency between the items of the instrument of (English teacher's knowledge of brain-based learning in Hebron Governorate) and its total degree.

- The stability of the resolution:

It was confirmed by calculating Cronbach's alpha coefficient for the items of the questionnaire, as the stability factor was calculated for each instrument of the resolution. Table (3.7) shows the reliability coefficients:

Table (3.7) Coefficients of stability using Cronbach's alpha

No.	instruments	Item No.	Stability coefficient
1	The use of educational aids by Teachers of English in Hebron Governorate	33	0.994
2	English teacher's knowledge of brain-based learning in Hebron Governorate	21	0.832

It is clear from Table (3.7) that the stability coefficients for the two instruments of the resolution were greater than (0.70), which is the minimum for accepting the reliability coefficient. Thus, the validity and reliability of the resolution are verified. Therefore, the final image of the questionnaire is made up of (54) items distributed on two main instruments, as in Appendix No. (2).

3.5 Study variables. Independent variable: The actual use of the Educational Aids, dependent variable: Knowledge of brain researches-based learning.

The researcher used the software of the Statistical Package for Social Sciences (SPSS) to process the data obtained from applying the study tool to the sample of the

Teachers of English in the Hebron Governorate. Therefore, the researcher used the following statistical methods:

- Pearson correlation coefficient: to calculate the validity of the internal consistency, and the relationship between the use of educational aids and teachers' knowledge of brain-based learning in Hebron Governorate
- Cronbach's alpha stability factor: to calculate the stability coefficients of the study tool.
- The means, standard deviations, and relative weight to determine the degree of the agreement of the study sample with the items of the questionnaire.
- T-test for two independent samples: to find out the significance of the difference between the means according to the variables that have a binary classification such as gender.
- The test of one-way analysis of variance: to identify the significance of the difference between the means according to the variables that have a triple classification or more such as the directorate, academic qualification, and years of experience.
- **Classification of the degrees of the response:**

1. The instrument of (the use of educational aids by Teachers of English in Hebron Governorate):

Table (3.8): Classification of responses on the instrument of (the use of educational aids)

Mean	Corresponding Relative Weight	Use Level
1-less than 1.8	20% - less than 36%	Very low
1.8-less than 2.6	36% - less than 52%	Low
2.6-less than 3.4	52% - less than 68%	Medium
3.4-less than 4.2	68% - less than 84%	High
4.2- 5	84%- 100%	Very high

2. The instrument of (English teacher's knowledge of brain-based learning in Hebron Governorate)

Table (3.9): Classification of responses on the instrument of (brain-based learning)

Mean	Corresponding Relative Weight	Knowledge Level
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1-less than 1.67	33.3%- less than 55.7%	Low
1.67-less than 2.34	55.7%- less than 78%	Medium
2.34- 3	78%- 100%	High

Chapter Four

Results of the Study

4.1 Results Related to the First Question

4.2 Results Related to the second question

4.3 Results Related to the third question

4.4 Results Related to the fourth question

4.5 Results Related to the fifth question

Chapter Four

Results of the Study

This study aims to identify the Actual Use of English Language Teachers for the Educational Aids in Hebron Governorate and its Relation to their Knowledge of Brain Researches-Based Learning. This chapter aims to present the results of the study by answering the research questions and hypotheses.

4.1 Results Related to the First Question:

The first question stated that what is the reality of using educational aids by Teachers of English in the Hebron Governorate?

To answer this question, the researcher calculated the means, standard deviations, relative weights, rank, and degree of use for each domain and each item of the instrument of (the use of educational aids by Teachers of English in the Hebron Governorate) and the total degree. Tables (4.1-4.4) illustrate the results of the answer to the first question:

Table (4.1): Means, standard deviations, relative weights, rank, and degree of use of the Domains of using educational aids and the total degree

No.	Domains	Means	S.D	Relative Weights	Rank	Degree
1	Educational aids preparation	4.05	1.08	0.81	1	High
2	Using the educational aids	3.92	1.06	0.78	3	High
3	Evaluation	3.98	1.11	0.80	2	High
The reality of using the educational aids		3.99	1.07	0.80	--	High

In table (4.1), all domains of the instrument of the use of educational aids by Teachers of English in the Hebron Governorate came with a high degree of use. The means ranged between (3.98 - 4.05), all of which were greater than the minimum for the degree of high use (3.4) according to the criterion adopted in the study.

Generally, the mean of the instrument of the use of educational aids was (3.99) with a relative weight of (79.85%), with a high degree of use, which indicates the use of educational aids by Teachers of English in the Hebron Governorate is high.

The following is an analysis of the items of the questionnaire according to their domains:

1) The domain of educational aids preparation:

Table (4.2): Means, standard deviations, relative weights, rank, and degree of use for each item in the domain of educational aids preparation and the total degree

No.	Items	Mean	S.D	Relative Weights	Rank	Degree
1	I think about the purposes that the aid will achieve.	3.93	1.29	78.57%	12	High
2	I choose the appropriate educational aid for the subject of learning.	4.36	1.11	87.26%	1	Very High
3	I take into account the individual differences between students when choosing an educational aid.	4.08	1.27	81.55%	6	High
4	I take into account the financial capabilities available to the school when choosing an educational aid.	4.04	1.21	80.71%	8	High
5	I choose the educational aid according to the time specified for the class.	4.02	1.23	80.48%	9	High
6	I recognize the educational aid in terms of content, characteristics, and suitability to the subject and objectives of the lesson.	4.25	1.13	85.00%	2	Very High
7	I recognize the educational aid in terms of content, characteristics, and its suitability to the learners' previous	3.94	1.25	78.81%	11	High

No.	Items	Mean	S.D	Relative Weights	Rank	Degree
	experiences					
8	I try the chosen educational aid several times before using it during the class.	3.71	1.35	74.29%	13	High
9	I plan to use the aid in light of the objectives to be achieved.	4.10	1.24	81.90%	4	High
10	I prepare students' minds to use the aid so that they have a background about its topic.	4.08	1.20	81.67%	5	High
11	I prepare students' minds to use the aid so that they have a background about its objectives.	4.16	1.13	83.21%	3	High
12	Explain to the students how they will benefit from the aid in developing their previous experiences.	4.06	1.17	81.19%	7	High
13	I prepare the space in a way that helps the chosen aid to be used So that it performs the intended benefit	3.98	1.16	79.64%	10	High
The domain of educational aids preparation		4.05	1.08	0.81	1	High

In table (4.2), all expressions indicating the domain of (preparing educational aids) among Teachers of English in the Hebron Governorate came with a high degree of use, as the mean ranged between (3.71 - 4.36) and all of them were greater than the minimum for the degree of high use (3.4) according to the criterion adopted in the study.

Generally, the mean for the domain of educational aid preparation reached (4.05) with a relative weight of (81%), and with a high degree of use. This indicates that English teachers' preparation of educational aids in the Hebron Governorate is high.

2) The domain of using educational aids:

Table (4.3): Mean, standard deviations, relative weights, rank, and degree of use for each item of the domain of using the educational aids and the total degree.

No.	Items	Mean	S.D	Relative Weights	Rank	Degree
1	I explain the purpose of the educational aids at each step during the lesson.	3.83	1.18	76.55%	6	High
2	I make sure that the aid used is didactic.	3.96	1.15	79.29%	5	High
3	I involve students in planning the lesson, to achieve clear goals in their minds by the aid.	3.71	1.22	74.17%	9	High
4	I make sure to involve students in choosing the educational aid.	3.76	1.18	75.24%	7	High
5	I vary in the use of educational and learning aids to take into account individual differences between the learners.	4.11	1.18	82.14%	3	High
6	I show exciting visual images to capture students' attention and interest.	4.18	1.17	83.69%	2	High
7	I have my students listen to audio recordings to stimulate their curiosity and attention.	4.05	1.26	81.07%	4	High
8	I show lesson objectives on the chalkboard.	3.74	1.36	74.88%	8	High
9	I make sure that I use the educational aid at the appropriate time.	4.24	1.13	84.76%	1	Very High
10	I divide students into groups when presenting the educational aid.	3.61	1.25	72.26%	10	High
The domain of using the educational aids		3.92	1.06	0.78	3	High

In table (4.3), all items indicating the domain of (the use of educational aids) by teachers of English in the Hebron Governorate came with a high degree of use. The mean ranged between (3.61 - 4.24) and all of them were greater than the minimum for the degree of high use i.e., (3.4) according to the criterion adopted in the study.

Generally, the mean of the domain of using educational aids reached (3.92) with a relative weight of (78%), and with a high degree of use. This indicates that the use of educational aids by Teachers of English in the Hebron Governorate is high.

3) Domain of evaluation:

Table (4.4): Mean, standard deviations, relative weights, rank, and degree of use for each item of the evaluation domain and the total degree

No.	Items	Mean	S. D	Relative Weights	Rank	Degree
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No.	Items	Mean	S. D	Relative Weights	Rank	Degree
1	I make sure to involve students in evaluating the educational aid that was used.	3.70	1.21	74.05%	10	High
2	I make sure that the educational aid reflects its idea clearly and truly.	3.99	1.24	79.88%	7	High
3	I make sure that the educational aid has increased learners' understanding of the topic of the lesson	4.04	1.20	80.71%	4	High
4	I check the scientific validity of the educational aid.	4.10	1.27	81.90%	1	High
5	I make sure that the educational aid used is appropriate for the students' age group.	4.09	1.26	81.79%	2	High
6	I investigate whether the educational aid is worth the time and effort spent in developing and using it.	3.90	1.16	77.98%	9	High
7	I make sure that I take into account the individual differences of students when preparing and using the educational aid.	3.99	1.14	79.88%	6	High
8	I make sure that the educational aid is appropriate for the learner's preferences, attitudes and skills.	4.04	1.17	80.83%	3	High
9	I evaluate if the students have benefited from the educational aid, and the extent to which it has achieved the objectives of the lesson.	3.96	1.21	79.17%	8	High
10	The process of evaluating the educational aid helps me in improving its use in the coming times.	4.02	1.16	80.36%	5	High
The domain of using the educational aids		3.98	1.11	0.80	2	High

In table (4.4), all the expressions indicating the domain of (evaluation) by Teachers of English in the Hebron Governorate came with a high degree of use. The mean ranged

between (3.70 - 4.10) and all of them were greater than the minimum for the degree of high use (3.4) according to the criterion adopted in the study.

Generally, the mean of the domain of using educational aids reached (3.98) with a relative weight of (80%), and with a high degree of use. This indicates that the use of educational aids by Teachers of English in the Hebron Governorate is high.

4.2 Results Related to the second question:

The second question stated that, is there a statistically significant difference between the mean of the responses of the study sample about the reality of using educational aids according to the variables (gender, academic qualification, years of experience, directorate)? To answer the question, the research tested the following null hypotheses:

- **Hypothesis test related to the variable of gender:**

The research tested the following null hypothesis: There is no statistically significant difference between the mean of the responses of the study sample about the reality of using educational aids according to the gender variable. Because the gender variable is a categorical variable that has two independent levels, the "T" test was used for two independent samples. The following are the results of the comparison:

Table (4.5): Results of the T-test for two independent samples to reveal the significance of differences in sample individuals e members about the reality of using educational aids according to the gender variable

N		Mean	S. D	D. F	"t" value	Sig.
male	104	3.79	1.08	166	3.176	0.002
female	64	4.32	0.97			

In table (4.5), the probability value (Sig) is less than (0.05). This indicates that there is a statistically significant difference between the mean of males and females of the study sample about the reality of their use of educational aids. Thus, the null hypothesis is rejected, while accepting the alternative hypothesis that states: There is a statistically significant difference between the mean of the responses of the study sample on the reality of using educational aids according to the gender variable, and

for the benefits of females if the mean of their responses is (4.32) while the mean for males is (3.79).

- **Hypothesis test related to the variable of the academic qualification:**

The researcher calculated the mean and standard deviations according to the academic qualification variable, and table (4.6) shows the results:

Table (4.6): mean and standard deviations of the responses of the study sample about the reality of using educational aids according to the academic qualification variable

Academic qualification	Number	Mean	Standard deviation
Diploma	9	4.53	0.25
Bachelor	135	3.96	1.12
Postgraduate	24	3.97	0.94
Total	168	3.99	1.07

To make sure that there is statistically significant difference between the mean, the research tested the following null hypothesis: There is no statistically significant difference between the mean of the responses of the study sample about the reality of using educational aids according to the academic qualification variable. The researcher used the one-way analysis of variance test because this variable is classified with three levels. The following are the results of the comparison between the mean:

Table (4.7): Results of one-way analysis of variance test to reveal the significance of the differences in the sample members about the reality of using educational aids according to the academic qualification variable

Source	Sum of squares	D. F	Square average	F value	Sig.
between groups	2.71	2	1.35	1.192	0.30
Within groups	188.05	165	1.14		
Total	190.76	167			

In table (4.7) the probability value (Sig) is greater than the level of significance (0.05). This means that there is no statistically significant difference in the responses of Teachers of English in the Hebron Governorate regarding the use of educational aids according to the academic qualification. Thus, the null hypothesis is accepted, which states: There is no statistically significant difference between the mean of the responses of the study sample about the reality of using educational aids according to the academic qualification variable.

- **Hypothesis test related to the variable of years of experience:**

The researcher calculated the mean and standard deviations according to the years of experience variable, and table (4.8) shows the results:

Table (4.8): mean and standard deviations of the responses of the study sample about the reality of using educational aids according to the years of experience variable

years of experience	Number	Mean	Standard deviation
Less than 5 years	30	3.25	1.45
From 5 – 10 years	32	3.70	1.36
From 10 – 15 years	47	4.26	0.82
More than 15 years	59	4.32	0.48
Total	168	3.99	1.07

To make sure that there is statistically significant difference between the mean, the research tested the following null hypothesis: There is no statistically significant difference between the mean of the responses of the study sample about the reality of using educational aids according to the variable of years of experience. Because this variable is classified into three levels, the one-way analysis of variance test was used. The following are the results of the comparison between the means:

Table (4.9): Results of the one-way analysis of variance test to reveal the significance of the differences in the sample members about the reality of using educational aids according to the variable of years of experience

Source	Sum of squares	D. F	Square average	F value	Sig.
between groups	28.94	3	9.64	9.779	0.000
Within groups	161.82	164	0.98		
Total	190.76	167			

In table (4.9), the probability value (Sig) is less than the level of significance (0.05), and this means that there is a statistically significant difference in the responses of Teachers of English in the Hebron Governorate regarding the use of educational aids according to years of experience. Thus, the null hypothesis is rejected, while accepting the alternative hypothesis which states: There is a statistically significant difference between the mean of the responses of the study sample about the reality of using educational aids according to the years of experience variable.

The Scheffe test is used to determine the direction of the differences. The results have shown that there were differences between the two groups (less than 5 years - more than 15 years) for the benefit of the group (more than 15 years), between the two groups (less than 5 years - from 10 - 15 years) for the benefit of the group (from 10-15 years), and between the two groups (from 10-15 years old - more than 15 years old) for the benefit of the group (more than 15 years). While there were no differences between the other groups.

- **Hypothesis test related to the variable of directorate:**

The researcher calculated the mean and standard deviations according to the directorate variable, and table (4.10) shows the results:

Table (4.10): mean and standard deviations of the responses of the study sample about the reality of using educational aids according to the directorate variable

years of experience	Number	Mean	Standard deviation
South Hebron	43	3.80	1.36
North Hebron	70	3.84	1.03
Central Hebron	9	4.58	0.45
Yatta	46	4.29	0.79
Total	168	3.99	1.07

To make sure that there is statistically significant difference between the mean, the research tested the following null hypothesis : There is no statistically significant difference between the mean of the responses of the study sample about the reality of using educational aids according to the variable of the directorate. Because this variable is classified into three levels, the one-way analysis of variance test was used. The following are the results of the comparison between the mean:

Table (4.11): Results of the one-way analysis of variance test to reveal the significance of the differences in the sample members about the reality of using educational aids according to the variable of the directorate

Source	Sum of squares	D. F	Square average	F value	Sig.
between groups	10.56	3	3.52	3.204	0.025
Within groups	180.20	164	1.09		
Total	190.76	167			

In table (4.11), the probability value (Sig) is less than the level of significance (0.05), and this mean that there is a statistically significant difference in the responses of Teachers of English in the Hebron Governorate regarding the use of educational aids according to the Directorate of Education in which the teacher works. Thus, the null hypothesis is rejected, while accepting the alternative hypothesis which states: There is a statistically significant difference between the mean of the responses of the study sample about the reality of using educational aids according to the directorate variable.

The Least Significant Difference Test was used (LSD) to determine the direction of the differences. The results have shown that there is a difference between the two groups (South Hebron - Central Hebron) for the benefits of the category (Central Hebron), between the two groups (North Hebron - Central Hebron) for the benefits of the group (Central Hebron), between the two groups (South Hebron - Yatta) for the benefits of the group (Yatta), and between the two groups (North Hebron - Yatta) for the benefits of the group (Yatta). While there were no differences between the other groups.

4.3 Results Related to the third question:

The third question stated that what is the knowledge level of Teachers of English regarding brain-based learning in the Hebron Governorate? To answer the question, the researcher calculated the means, standard deviations, relative weights, rank, and degree of use for each item of the instrument (knowledge of learning based on brain research) and the total degree. Table (4.9) shows the results of the answer to the third question:

Table (4.12): Mean, standard deviations, relative weights, rank, and degree of use for each item in the instrument (knowledge of brain-based learning) and the total degree

No.	Items	Mean	S.D	Relative Weights	Rank	Level of knowledge
1	Students' learning method plays an important role in the educational environment.	2.93	0.26	97.62%	1	High
2	The learning process happens through many parts of the two sides of the brain interact together, and the occurrence of a complex operational link.	2.57	0.50	85.52%	15	High
3	The learning process occurs when there is an excitatory to the brain.	2.88	0.32	96.03%	2	High
4	The silent reading activates the frontal lobes of the brain.	2.39	0.58	79.76%	18	High
5	During the process of	2.37	0.60	78.97%	20	High

No.	Items	Mean	S.D	Relative Weights	Rank	Level of knowledge
	distinguishing between words and processing information, there is a complex interaction occurs between the two sides of the brain.					
6	The brain is characterized by its ability to discover, understand and determine meanings.	2.83	0.37	94.44%	4	High
7	The processes of learning and remembering are closely related and cannot be isolated, as each affects and is affected by the other process.	2.81	0.39	93.65%	6	High
8	Effective learning depends mainly on the extent to which the individual understands his/her unique mental structure.	2.57	0.61	85.71%	14	High
9	Diversification and enrichment of the learning environment contribute to attracting learners' attention and stimulating their brains.	2.74	0.54	91.47%	8	High
10	The human brain is characterized by its flexibility and constant change throughout life.	2.73	0.52	91.07%	9	High
11	Situations of threat, fear, and embarrassment put the brain in a state of alert.	2.71	0.54	90.48%	12	High
12	The human brain differs from one person to another.	2.72	0.61	90.67%	11	High
13	The left and right sides of the brain improve as the learner encounters new learning situations and experiences.	2.77	0.42	92.26%	7	High
14	The learner's brain loses the required meaning if the educational experiences that the learner encounters are below or above his/her level.	2.52	0.61	83.93%	16	High
15	The brain grows and develops by	2.73	0.50	90.87%	10	High

No.	Items	Mean	S.D	Relative Weights	Rank	Level of knowledge
	interacting and cooperating with others.					
16	Brain capacity improves as the learner becomes more mature.	2.82	0.47	93.85%	5	High
17	The brain can model experiences to facilitate understanding and perception of meaning.	2.69	0.52	89.68%	13	High
18	Every learner is distinguished from others in the formation of his brain, experiences, capabilities, and capacity.	2.85	0.36	94.84%	3	High
19	The right side of the brain deals with visual situations.	2.43	0.54	80.95%	17	High
20	The left side of the brain deals with the time required to complete a task.	2.38	0.54	79.17%	19	High
21	The learner can deal with all educational situations.	2.30	0.80	76.59%	21	Medium
Knowledge of learning based on both sides of the brain		2.65	0.21	88.42%	--	High

In table (4.9), all the expressions on the instrument (knowledge of learning based on both sides of the brain) among Teachers of English in the Hebron Governorate came with a high degree of use. The mean ranged between (2.30 - 2.93) and all of them are greater than the minimum score for the high knowledge level of (2.34) according to the criterion adopted in the study

Generally, the mean of the instrument of the knowledge of learning based on both sides of the brain was (2.65), with a relative weight of (88.42%) and with a high degree of use. This indicates that teachers' knowledge of learning based on both sides of the brain is high.

4.4 Results Related to the fourth question:

The fourth question stated that, is there a statistically significant difference between the mean of the responses of the study sample about the reality of using educational aids according to the variables (gender, academic qualification, years of experience, directorate)? To answer the question, the following null hypotheses were tested:

- **Hypothesis test related to the variable of gender:**

The research tested the following null hypothesis: There is no statistically significant difference between the means of the responses of the study sample about the level of the knowledge of brain-based learning according to the gender variable. Because the gender variable is a categorical variable that has two independent levels, the "T" test was used for two independent samples. The following are the results of the comparison:

Table (4.13): Results of the T-test of independent samples test to reveal the significance of differences in sample members about the knowledge of brain-based learning according to the gender variable

N		Mean	S.D	D. F	"t" value	Sig.
male	104	2.60	0.22	166	4.131	0.001
female	64	2.74	0.18			

In table (4.13), the probability value (Sig) is less than (0.05). This indicates that there is a statistically significant difference between the mean of males and females of the study sample about the knowledge of brain-based learning. Thus, the null hypothesis is rejected, while accepting the alternative hypothesis that states: There is a statistically significant difference between the mean of the responses of the study sample on the knowledge of brain-based learning according to the gender variable, and for the benefits of females if the mean of their responses is (2.74) while the mean for males is (2.60).

- **Hypothesis test related to the variable of academic qualification:**

The research tested the following null hypothesis: There is no statistically significant difference between the mean of the responses of the study sample about the knowledge of brain-based learning according to the academic qualification variable. The one-way analysis of variance test was used because this variable is classified with three levels. The following are the results of the comparison between the mean:

Table (4.14): Results of one-way analysis of variance test to reveal the significance of the differences in the sample members about the knowledge of brain-based learning according to the academic qualification variable

Source	Sum of squares	D. F	Square average	F value	Sig.
between groups	0.03	2	0.01	0.362	0.697
Within groups	7.62	165	0.04		
Total	7.65	167			

In table (4.14), the probability value (Sig) is greater than the level of significance (0.05). This means that there is no statistically significant difference in the responses of Teachers of English in the Hebron Governorate regarding the knowledge of brain-based learning according to the academic qualification. Thus, the null hypothesis is accepted, which states: There is no statistically significant difference between the mean of the responses of the study sample about the knowledge of brain-based learning according to the academic qualification variable.

- **Hypothesis test related to the variable of years of experience:**

The research tested the following null hypothesis: There is no statistically significant difference between the mean of the responses of the study sample about the knowledge of brain-based learning according to the variable of years of experience. Because this variable is classified into three levels, the one-way analysis of variance test was used. The following are the results of the comparison between the mean:

Table (4.15): Results of the one-way analysis of variance test to reveal the significance of the differences in the sample members about the knowledge of brain-based learning according to the variable of years of experience

Source	Sum of squares	D. F	Square average	F value	Sig.
between groups	0.42	3	0.14	3.234	0.02
Within groups	7.23	164	0.04		
Total	7.65	167			

In table (4.15), the probability value (Sig) is less than the level of significance (0.05), and this means that there is a statistically significant difference in the responses of Teachers of English in the Hebron Governorate regarding the knowledge of brain-based learning according to years of experience. Thus, the null hypothesis is rejected, while accepting the alternative hypothesis which states: There is a statistically

significant difference between the mean of the responses of the study sample about the knowledge of brain-based learning according to the years of experience variable.

The Scheffe test was used to determine the direction of the differences. The results have shown that there were differences between the two groups (less than 5 years - from 10- 15 years) for the benefits of the group (from 10- 15 years), between the two groups (from 5- 10 years - from 10 - 15 years) for the benefits of the group (from 10- 15 years), and between the two groups (more than 15 years - from 10-15 years) for the benefits of the group (from 10-15 years). While there were no differences between the other groups.

- **Hypothesis test related to the variable of directorate:**

The research tested the following null hypothesis: There is no statistically significant difference between the mean of the responses of the study sample about the knowledge of brain-based learning according to the variable of the directorate.

Because this variable is classified into three levels, the one-way analysis of variance test was used. The following are the results of the comparison between the mean:

Table (4.16): Results of the one-way analysis of variance test to reveal the significance of the differences in the sample members about the knowledge of brain-based learning according to the variable of the directorate

Source	Sum of squares	D. F	Square average	F value	Sig.
between groups	1.24	3	0.41	10.56	0.000
Within groups	6.41	164	0.03		
Total	7.65	167			

In table (4.16), the probability value (Sig) is less than the level of significance (0.05), and this mean that there is a statistically significant difference in the responses of Teachers of English in the Hebron Governorate regarding the knowledge of brain-based learning according to the Directorate of Education in which the teacher works. Thus, the null hypothesis is rejected, while accepting the alternative hypothesis which states: There is a statistically significant difference between the mean of the responses

of the study sample about the knowledge of brain-based learning according to the directorate variable.

The research used the Least Significant Difference Test (LSD) to determine the direction of the differences. The results have shown that there are differences between the two groups (South Hebron - North Hebron) for the benefits of the category (North Hebron), between the two groups (North Hebron - Central Hebron) for the benefits of the group (Central Hebron), and between the two groups (North Hebron - Yatta) for the benefits of the group (Yatta). While there were no differences between the other groups.

4.5 Results Related to the fifth question:

The fifth question stated that, is there a statistically significant correlation between the reality of using educational aids by English teachers, and their level of knowledge of brain-based learning? To answer the question, the research tested the following null hypothesis: There is no statistically significant correlation between the reality of using educational aids by English teachers, and their level of knowledge of brain-based learning.

The researcher used Pearson Linear Correlation Coefficient to reveal the type and amount of the relationship between the reality of using educational aids by English teachers, and their level of knowledge of brain-based learning.

Table (4.17) The correlation coefficient between the reality of using educational aids by English teachers, and their level of knowledge of the brain-based learning

Using educational aids	Knowledge of the brain-based learning	
	Correlation Coefficient	Level of significance
	0.207	0.007

In table (4.17), there is a weak direct correlation between the reality of using educational aids by English teachers, and their level of knowledge of brain-based learning. The correlation coefficient reached (0.207) at the level of significance (0.007), thus rejecting the null hypothesis and accepting the alternative hypothesis stating: There is a positive statistically significant correlation between the reality of using educational aids by English teachers, and their level of knowledge of the brain-based learning.

Chapter Five

Discussion of the Results and Recommendations

5.1 Discussion of the Results Related to the First Question:

5.2 Discussion of the Results Related to the Second Question:

5.3 Discussion of the Results Related to the Third Question

5.4 Discussion of the results Related to the Fourth question

5.5 Discussion of the Results Related to the Fifth question

5.6 Summary of the results:

5.7 Recommendations:

Chapter Five

Discussion of the Results, Conclusion and Recommendations

In chapter five, the researcher discussed the results that were concluded after the statistical analysis of the results. Then, he/she discussed these results and provided a set of recommendations related to the study and its results.

5.1 Discussion of the Results Related to First Question:

The first question stated that what is the reality of using educational aids by Teachers of English in the Hebron Governorate?

This question is answered by calculating the mean, standard deviations, relative weights, rank, and degree of use that express the use of educational aids by teachers of English in the Hebron Governorate. The degree of the use of educational aids among English language teachers in Hebron Governorate was high according to Table (4.1), as the mean of this score on the total degree of the instrument was (3.99) with a standard deviation of (1.07).

The domain of "Educational Aids Preparation" came first with a mean of (4.05), a standard deviation of (1.08), and a high degree of use. The domain of "evaluation" came in the second place with a mean (3.98), a standard deviation of (1.11), and a high degree of use. While the domain of "the use of the educational aids " came in third and last place, with a mean (3.92), a standard deviation of (1.06), and a high degree of use.

The researcher attributes the reason for this to the awareness of teachers of English of the importance of the educational aids in student learning, and their impact on understanding and comprehension on the one hand, as these aids provide an element of attraction and excitement for students towards learning. On the other hand, the educational aids have also impact on information retention, as it helps to simplify and facilitate information through which the teacher can take into account individual differences among students as in technological innovations. Each educational aid has a function and a goal that it can achieve. Hence, the importance of planning or preparing for educational aid emerges, which is the first stage and of great importance in the educational situation. The teacher; therefore, must choose the appropriate aid for the educational situation in which it will be used, after determining the behavioral

objectives of the lesson, arranging them according to the educational outcomes that they represent, determining the characteristics of the required aid, and analyzing the characteristics of the teachers. Besides, it seems that the teachers of English, who are the study sample, are aware of this, as this is evident in the domain of " educational aids preparation" which came first. This indicates that teachers of English use the preparation of educational aids to a large extent, and it is worth noting that teachers of English focus on choosing the appropriate educational aid for the subject of learning, and on realizing it in terms of content and characteristics and its great suitability to the topic of the lesson and its objectives.

It is also noticeable that Teachers of English are more interested in evaluating the educational aids compared to the use of these aids, and they focus largely on verifying the suitability of the teaching aid for the lesson, the age of the learners, their preferences and attitudes, the extent of their understanding of the subject of the lesson through it, and to benefit from the evaluation in improving its use in the coming times. What helps the teachers of English in the success of employing the teaching aid is that they diversify them to consider the individual differences between the learners, and their interest in using them at the appropriate time and in showing exciting visual images and audio recordings to attract students' attention.

This result is consistent with the study of (Younis, 2017), which showed that the teacher has knowledge and awareness of the importance of using educational methods in teaching, and the study of (Rjm, 2016), which showed that teachers are in great agreement on the importance of educational aids and their necessity to stimulate classroom communication. However, this result disagrees with Othman's study (2015), which showed the results of the scarcity of using modern educational aids at the secondary stage in Al Dabba locality, and it also disagrees with the study of (Al Ne'ma & Dawoud,2007)) that showed the lack of use of educational aids and games in kindergartens in the Iraqi country.

5.2 Discussion of the Results Related to the Second Question:

The second question stated that, is there a statistically significant difference between the mean of the study sample responses about the reality of using educational aids according to the variables (gender, academic qualification, years of experience, directorate)?

To answer the question, the research tested the following null hypotheses:

The first hypothesis stated that "There is no a statistically significant difference between the mean of the responses of the study sample about the reality of using educational aids according to the gender variable."

To examine the first null hypothesis, the researchers used the "t" test for two independent samples, to reveal whether there is a statistically significant difference

between the mean of the responses of the study sample about the reality of using educational aids according to the gender variable.

The results of the "t" test for two independent samples, through Table (4.5), have shown that the probability value (sig) is less than the level of significance (0.05). This means that "there is a statistically significant difference between the mean of the responses of the study sample about the reality of using educational aids according to the gender variable. This is in favor of females.

This could be due to the teachers' passion, their love for work, their seriousness in completing the required tasks with high accuracy, and their courage to show their work more than their peers. Besides, they also have a high ability of effective communication with students, and this may be due to the female teachers' awareness of the importance of educational aids in raising the degree of excitement among students and attracting them to learning, this may be explained by the feelings of motherhood that the teachers show towards their students, and their interest in their excellence.

The second hypothesis stated that "There is no statistically significant difference between the mean of the responses of study sample responses about the reality of using educational aids according to the academic qualification variable."

The results of the single analysis of variance test, from Table (4, 6) have shown that the probability value (sig) is greater than the level of significance (0.05). This means, "there is no statistically significant difference between the mean of the responses of the study sample about the reality of using educational aids according to the academic qualification variable."

It was assumed that the results would be different and in favor of the holders of a postgraduate degree. However, the reason for this may be that the holders of a bachelor's degree make up the largest percentage among the study sample, as they represent 80.4% of the study sample. Therefore, this indicates, on one hand, that the universities' interest in preparing highly qualified and skilled teachers. On the other hand, this may be due to the Ministry of Education's interest in training all teachers of English of various academic qualifications during service on the use of various types of educational aids, in addition to how to plan, prepare, use and verify their effectiveness.

The results of this study are consistent with the study of (Al Hassan and Al Tayyeb, 2011), which showed that there is no statistically significant difference between the responses of the sample members about the importance of using educational aids due to the academic qualification variable.

The third hypothesis stated that **"There is no statistically significant difference between the mean of the responses of the study sample about the reality of using educational aids according to the variable of years of experience."**

To examine the third null hypothesis, the one-way analysis of variance test was used to detect whether there is a statistically significant difference between the mean of the study sample responses about the reality of using educational aids according to the variable of years of experience.

The results of the one-way analysis of variance test, from Table (4.7), have shown that the probability value (sig) is less than the level of significance (0.05), meaning that "there is a statistically significant difference between the mean of the study sample responses about the reality of using educational aids according to the variable of years of experience." It is for the benefit of years of experience (more than 15 years).

It could be due to the fact that teachers with higher academic qualifications are more aware of the importance of educational aids than their peers with less experience, although those with experience ranging from (5-10 years) are the most active. In this period of years of experience, teachers are keen on professional development, providing their maximum knowledge and experience, and more striving for excellence. This is because of their desire to be promoted, so we find them in a state of constant development motivated by promotion and bonus, and thus improving the level of their salaries. This could be explained as that there is a difference in n favor of the experienced (10-15 years) that these teachers are more knowledgeable and experienced in teaching skills.

This result disagrees with the results of the study of (Al Hassan and Al Tayyeb, 2011), which showed that there is no statistically significant difference between the responses of the sample members about the importance of using educational aids due to variables (gender, academic qualification, years of experience).

The fourth hypothesis stated that "There is no statistically significant difference between the mean of the responses of the study sample about the reality of using educational aids according to the directorate variable."

To examine the fourth null hypothesis, the one-way analysis of variance test was used to detect whether there is a statistically significant difference between the mean of the responses of the study sample about the reality of using educational aids according to the directorate variable.

The results of the one-way analysis of variance test from Table (4.8) have shown that the probability value (Sig) is less than the significance level (0.05). this means that "there is a statistically significant difference between the mean of the responses of the study sample about the reality of using educational aids according to the variable of the directorate", and in favor of Yatta Directorate.

This indicates that teachers of English in the Yatta Directorate use educational aids more than the other directorates of the Hebron Governorate. This may be due to the fact that females represent 69% of teachers of English in the Yatta Directorate, which is the largest percentage compared to males. Besides, this may be due to the fact that (93.6%) of English language teachers in the Yatta Directorate hold a bachelor's degree. This also may be due to the fact that (42.5%) of teachers of English in the Yatta Directorate have experience of (10-15 years) in the field of teaching.

5.3 Discussion of the Results Related to the Third Question

The third question stated that what is the knowledge level of Teachers of English regarding brain-based learning in the Hebron Governorate?

The question is answered by calculating the mean, standard deviations, relative weights, rank, and degree of use that express teachers' knowledge of learning based on brain research in the Hebron Governorate. The level of knowledge of learning based on both sides of the brain among teachers of English in Hebron Governorate was high, according to Table (4.9), as the mean of this degree on the total degree for the instrument was (2.65) with a standard deviation of (0.21).

This may be due to the interest of Palestinian universities in pre-service teacher preparation programs, providing those teachers with the latest theories, and equipping them with the most important teaching skills such as teaching skills based on the theory of brain-based learning, as it has great importance in the educational process, especially in identifying individual differences between learners. It also helps in choosing the most appropriate teaching method, and this may be because of the Ministry of Education's interest in training teachers during the service and providing them with the necessary teaching skills and competencies, and its keenness to develop them professionally in all aspects related to their specializations. It is clear from this that the teachers of English in Hebron have a great knowledge of brain-based

learning. This means that they can reveal the characteristics of the learners, recognize the learning styles of each of them, create an appropriate classroom environment that allows for positive interaction between them, and provide the opportunity for students to acquire and develop critical thinking skills such as brainstorming and mental alertness. All of these are applied through individual and group work, and by stimulating the desired learning, as well as, encouraging students to present and share their ideas and experiences.

This result is consistent with the results of the study of (Kapadia, 2014), which have shown that teachers have a high level of knowledge based on brain-based learning, while it disagrees with the study of (Al Shaibani, 2019), which showed a low level of knowledge of the principles of brain-based learning among the study sample.

5.4 Discussion of the results Related to the fourth question

The fourth question stated that, is there a statistically significant difference between the mean of the study sample responses about the reality of using educational aids according to the variables (gender, academic qualification, years of experience, directorate)?

To answer the question, the following null hypotheses are tested:

The first hypothesis stated that "There is no statistically significant difference between the mean of the responses of the study sample about the level of the knowledge of brain-based learning according to the gender variable".

To tested the first null hypothesis, the "t" test was used for two independent samples to detect whether there is a statistically significant difference between the mean of the responses of the study sample about the level of knowledge of brain-based learning according to the gender variable.

The results of the "t" test for two independent samples, through Table (4.10), have shown that the probability value (Sig) is less than the significance level (0.05). This means that "there is a statistically significant difference between the mean of the responses of the study sample about the level of knowledge of brain-based learning depending if the mean of their responses is (2.74), and the mean for males is (2.60).

It could be due to the fact that female teachers are more interested in and interact with developments, unlike male teachers.

This result is consistent with the study of (Wad and Jabara, 2015), which have shown statistically significant differences in teachers' views about the effectiveness of using a brain-based learning strategy in training students to solve problems according to gender for the benefit of female teachers, in addition to the study of (Mansy, 2014) that have shown that there is a statistically significant difference between the mean of the study sample responses about the practice of brain-based learning strategies, depending on the gender variable, in favor of females.

However, it disagrees with the study of Al Kiyumi and Elian (2019), which have shown statistically significant differences between the estimates of the first teachers

of the extent to which science teachers practiced strategies consistent with the principles of brain-based learning for the gender variable in favor of males.

The second hypothesis stated that "There is no statistically significant difference between the mean of the responses of the study sample about the level of the knowledge of brain-based learning according to the academic qualification variable."

To examine the second null hypothesis, the one-way analysis of variance test was used to detect whether there is a statistically significant difference between the mean of the responses of the study sample about the level of knowledge of brain-based learning according to the academic qualification variable.

The results of the one-way analysis of variance test, from Table (4.11) showed that the probability value (sig) is greater than the significance level (0.05). This means that "there is no statistically significant difference between the mean of the responses of the study sample about the level of knowledge of brain-based learning according to the academic qualification variable ".

This may be due to the fact that the bachelor's degree holders represent (80%) of the study sample. The number of those with more than 10 years of experience represents (58.8%) of the bachelor's degree holders, as this category is with the most knowledgeable teachers about learning theories, including the theory of brain-based learning.

This study disagrees with the study of (Wad and Jabara, 2015), which showed that there were statistically significant differences according to the educational qualification variable in favor of the master's holders. It also disagrees with the study of (Hasnain, 2014), which showed that there were statistically significant differences between the degrees of the sample members on the questionnaire of practicing teaching skills by Arabic teachers in the light of learning based on the results of brain research according to the educational qualification variable, in favor of a "higher qualification or more".

The third hypothesis stated that "There is no statistically significant difference between the mean of the study sample responses about the level of the knowledge of brain-based learning according to the variable of years of experience."

To examine the third null hypothesis, the one-way analysis of variance test was used to detect whether there is a statistically significant difference between the mean of the responses of the study sample about the level of knowledge of brain-based learning according to the years of experience variable.

The results of the one-way analysis of variance test, from Table (4.12) showed that the probability value (sig) is less than the level of significance (0.05). This means that "there is a statistically significant difference between the mean of the study sample responses about the level of knowledge of brain-based learning according to the years of experience variable for the benefit of years of experience (10-15 years).

This result agrees with the results of the study of (Wad and Jabara, 2015), which showed a statistically significant difference according to the variable of experience in

favor of the experience of more than five years or more. It also agrees with the study of (Hasnain, 2014) which showed that there are differences according to the variable of experience in favor of the experience of more than 5 years.

However, it disagrees with the results of the study of (Al Anzi, 2019), which have shown differences according to the years of experience variable in favor of those with new experience, i.e., from 5-10 years.

The fourth hypothesis stated that "There is no statistically significant difference between the mean of the study sample responses about the knowledge of brain-based learning according to the variable of the directorate."

To examine the fourth null hypothesis, the one-way analysis of variance test was used to detect whether there is a statistically significant difference between the mean of the responses of the study sample about the level of knowledge of brain-based learning according to the directorate variable.

The results of the one-way analysis of variance test, from Table (4.13) have shown that the probability value (sig) is less than the significance level (0.05). This means "there is a statistically significant difference between the mean of the responses of the study sample about the level of knowledge of brain-based learning according to the variable of the directorate" for the benefit of the Yatta directorate.

This indicates that English language teachers in the Yatta directorate have more knowledge of brain-based learning compared to other directorates of Hebron Governorate, and this may be due to the fact that females represent 69% of English language teachers in Yatta directorate, which is the largest percentage compared to males. Besides, this may be due to the fact that (93.6%) of the English language teachers in the Yatta directorate hold a bachelor's degree. This also may be due to the fact that (42.5%) of English language teachers in the Yatta directorate have (10-15 years) experience in the field of teaching.

5.5 Discussion of the Results Related to the fifth question

The fifth question stated that, is there a statistically significant correlation between the reality of using educational aids by English teachers, and their level of knowledge of brain-based learning?

To answer the question, the following null hypothesis was tested: "There is no statistically significant correlation between the reality of using educational aids by teachers of English, and their level of knowledge of brain-based learning".

The Pearson Linear Correlation Coefficient was used to reveal the type and amount of the relationship between the reality of using educational aids by teachers of English, and their level of knowledge of brain-based learning.

The results of the linear correlation coefficient (Pearson), according to Table (4.14), have shown that the correlation coefficient reached (0.207) at a level of significance (0.007), and therefore: There is a direct correlational relationship with statistical

significance between the reality of using of educational aids by teachers of English and their level of knowledge of brain-based learning.

5.6 Summary of the results:

- 1- The degree of using educational aids by teachers of English is high, as the mean reached (3.99 out of 5) with a relative weight of (97.85%).
- 2- There is a statistically significant difference between the mean of the responses of the study sample on the reality of using educational aids according to the gender variable and for the benefits of females.
- 3- There is no statistically significant difference between the mean of the study sample responses about the reality of using educational aids according to the academic qualification variable.
- 4- There is a statistically significant difference between the mean of the study sample responses about the reality of using educational aids according to the years of experience variable.
- 5- There is a statistically significant difference between the mean of the study sample responses about the reality of using educational aids according to the directorate variable.
- 6- The level of knowledge of English language teachers of brain-based learning in Hebron governorate is high, as the mean reached (2.65 out of 3) with a relative weight of (88.42%)
- 7- There is a statistically significant difference between the mean of the study sample responses about knowledge of learning brain-based learning according to the gender variable, and for the benefit of females.
- 8- There is no statistically significant difference between the mean of the study sample responses, the level of knowledge of learning based on brain research, according to the degree variable.
- 9- There is a statistically significant difference between the mean of the study sample responses about the level of knowledge of brain-based learning according to the years of experience variable.
- 10- There is a statistically significant difference between the mean of the study sample responses about the level of knowledge of brain-based learning according to the directorate variable.
- 11- There is a direct correlational relationship of statistical significance between the reality of using educational aids by English teachers, and their level of knowledge of brain-based learning.

5.7 Recommendations:

In light of the results of the study, the researcher recommends the following:

Conducting a study aimed at identifying the most used educational aids and their relationship to the teachers' level of knowledge of brain-based learning.

Conducting a study aimed at identifying the obstacles to the use of some types of educational aids.

Conducting a study aimed at investigating the degree of interaction between the student and the teacher and its relationship to the use of various educational aids.

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Appendix (1): The final questionnaire

**Deanship of Postgraduate Studies
Al-Quds University**



"Questionnaire"

The researcher is conducting a study entitled "The reality of using educational aids by Teachers of English in Hebron Governorate and its relationship to their knowledge of brain-based learning" to complete the requirements for obtaining a master's degree in teaching methods from Al Quds University. To achieve the objectives of the study, the (researcher)

built a questionnaire directed to teachers of English in the Hebron Governorate.

The researcher hopes that you will answer the questionnaire frankly and honestly. This questionnaire will be used for practical research purposes, and only the researcher will see the data contained therein.

Best regards

The researcher

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First: Personal Information

Please, put (/) where you see fit:

gender		Male		Female
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Academic qualification	diploma		Bachelor		postgraduate studies
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Experience in teaching		Less than 5 years		5-10 years
		10-less than 15 years		15 years and more

Directorate		Central Hebron		North Hebron
		South Hebron		Yatta

Second: The reality of using educational aids by English teachers:

Please, evaluate each paragraph honestly and objectively.

N.	Item	Degree				
		Very High	High	Medium	Low	Very low
Educational Aids Preparation						
1	I think about the purposes that the aid will achieve.					
2	I choose the appropriate educational aid for the subject of learning.					
3	I take into account the individual differences between students when choosing an educational aid.					
4	I take into account the financial capabilities available to the school when choosing an educational aid.					
5	I choose the educational aid according to the time specified for the class.					
6	I recognize the educational aid in terms of content, characteristics, and suitability to the subject and objectives of the lesson.					
7	I recognize the educational aid					

	in terms of content, characteristics, and its suitability to the learners' previous experiences					
8	I try the chosen educational aid several times before using it during the class.					
9	I plan to use the aid in light of the objectives to be achieved.					
10	I prepare students' minds to use the aid so that they have a background about its topic.					
11	I prepare students' minds to use the aid so that they have a background about its objectives.					
12	Explain to the students how they will benefit from the aid in developing their previous experiences.					
13	I prepare the space in a way that helps the chosen aid to be used So that it performs the intended benefit					
Using the Educational Aid						
1	I explain the purpose of the educational aids at each step during the lesson.					
2	I make sure that the aid used is didactic.					
3	I involve students in planning the lesson, to achieve clear goals in their minds by the aid.					
4	I make sure to involve students in choosing the educational aid.					
5	I vary in the use of educational and learning aids to take into account individual differences between the learners.					
6	I show exciting visual images to capture students' attention and interest.					
7	I have my students listen to audio recordings to stimulate their curiosity and attention.					

8	I show lesson objectives on the chalkboard.					
9	I make sure that I use the educational aid at the appropriate time.					
10	I divide students into groups when presenting the educational aid.					
Evaluation						
1	I make sure to involve students in evaluating the educational aid that was used.					
2	I make sure that the educational aid reflects its idea clearly and truly.					
3	I make sure that the educational aid has increased learners' understanding of the topic of the lesson					
4	I check the scientific validity of the educational aid.					
5	I make sure that the educational aid used is appropriate for the students' age group.					
6	I investigate whether the educational aid is worth the time and effort spent in developing and using it.					
7	I make sure that I take into account the individual differences of students when preparing and using the educational aid.					
8	I make sure that the educational aid is appropriate for the learner's preferences, attitudes and skills.					
9	I evaluate if the students have benefited from the educational aid, and the extent to which it has achieved the objectives of the lesson.					
10	The process of evaluating the educational aid helps me in improving its use in the					

	coming times.					
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Third: English teachers' knowledge of brain-based learning:

Please put (/) where you see fit:

N.	Item	No	Not Sure	yes
1	Students' learning method plays an important role in the educational environment.			
2	The learning process happens through many parts of the two sides of the brain interact together, and the occurrence of a complex operational link.			
3	The learning process occurs when there is an excitatory to the brain.			
4	The silent reading activates the frontal lobes of the brain.			
5	During the process of distinguishing between words and processing information, there is a complex interaction occurs between the two sides of the brain.			
6	The brain is characterized by its ability to discover, understand and determine meanings.			
7	The processes of learning and remembering are closely related and cannot be isolated, as each affects and is affected by the other process.			
8	Effective learning depends mainly on the extent to which the individual understands his/her unique mental structure.			
9	Diversification and enrichment of the learning environment contribute to attracting learners' attention and stimulating their brains.			
10	The human brain is characterized by its flexibility and constant change throughout life.			
11	Situations of threat, fear, and embarrassment put the brain in a state of alert.			

12	The human brain differs from one person to another.			
13	The left and right sides of the brain improve as the learner encounters new learning situations and experiences.			
14	The learner's brain loses the required meaning if the educational experiences that the learner encounters are below or above his/her level.			
15	The brain grows and develops by interacting and cooperating with others.			
16	Brain capacity improves as the learner becomes more mature.			
17	The brain can model experiences to facilitate understanding and perception of meaning.			
18	Every learner is distinguished from others in the formation of his brain, experiences, capabilities, and capacity.			
19	The right side of the brain deals with visual situations.			
20	The left side of the brain deals with the time required to complete a task.			
21	Students' learning method plays an important role in the educational environment.			

Thank you for your kind cooperation

Appendix (2): The final questionnaire (Arabic version)



عمادة الدراسات العليا

جامعة القدس

"استبانة"

يقوم الباحث بإجراء دراسة بعنوان "واقع استخدام معلمي اللغة الإنجليزية في محافظة الخليل للوسائل التعليمية وعلاقتها بمعرفتهم بالتعلم القائم على أبحاث الدماغ"، استكمالاً لمتطلبات الحصول على درجة الماجستير في أساليب التدريس، من جامعة القدس. ولتحقيق أهداف الدراسة قام (الباحث) ببناء استبانة خصيصاً لهذا الغرض؛ موجهة لمعلمي اللغة الإنجليزية في محافظة الخليل.

ويأمل الباحث من سيادتكم؛ الإجابة على الاستبيان بصدق وأمانة، علماً بأن هذا الاستبيان سيستخدم لأغراض البحث العملي فقط، ولن يطلع على أي من البيانات الواردة فيه سوى الباحث،

وتفضلوا بقبول فائق الاحترام والتقدير

الباحث

أحمد أبو الخيران

أولاً: البيانات الشخصية

أرجو وضع (/) في المكان الذي تراه مناسباً:

الجنس	ذكر	أنثى
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الدرجة العلمية	دبلوم	بكالوريوس	دراسات عليا
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الخبرة في التدريس	أقل من 5 سنوات	5- أقل من 10 سنوات
	10- إلى أقل من 15 سنة	15 سنة فأكثر

المديرية	وسط الخليل	شمال الخليل
	جنوب الخليل	يطا

ثانياً: واقع استخدام معلمي اللغة الإنجليزية للوسائل التعليمية:

لطفاً؛ أرجو تقييم كل فقرة بصدق وموضوعية.

م	الفقرة	بدرجة			
		مرتفعة جداً	مرتفعة	متوسطة	منخفضة جداً
إعداد الوسائل التعليمية					
1	أفكر بالأغراض التي ستحققها الوسيلة.				
2	اختار الوسيلة التعليمية المناسبة لموضوع التعلم.				
3	أراعي الفروق الفردية بين الطلبة عند اختيار الوسيلة التعليمية.				
4	أراعي الإمكانيات المادية المتاحة لدى المدرسة عند اختيار الوسيلة التعليمية.				
5	أختار الوسيلة التعليمية وفقاً لوقت الحصة.				
6	أتعرف على الوسيلة التعليمية من حيث المحتوى والخصائص ومدى مناسبة لموضوع الدرس وأهدافه.				
7	أتعرف على الوسيلة التعليمية من حيث المحتوى والخصائص ومدى مناسبة لخبرات المتعلمين السابقة.				
8	أجرب الوسيلة التعليمية المختارة عدة مرات قبل استخدامها أثناء الحصة.				
9	أخطط لاستخدام الوسيلة في ضوء الأهداف المراد تحقيقها.				
10	أهيئ أذهان الطلبة لاستخدام الوسيلة بحيث تكون لديهم صورة عن موضوعها.				
11	أهيئ أذهان الطلبة لاستخدام الوسيلة بحيث تكون لديهم صورة عن الغرض من استخدامها.				

12	أشرح للطلبة كيف سيستفيدون من الوسيلة في تنمية خبراتهم السابقة.				
13	أقوم بتهيئة المكان على النحو الذي يساعد في استخدام الوسيلة المختارة بحيث تؤدي الفائدة المرجوة منها.				
استخدام الوسائل التعليمية					
1	أحدد الغرض من الوسيلة التعليمية في كل خطوة أثناء سير الدرس.				
2	أحرص على أن تكون الوسيلة المستخدمة تعليمية.				
3	أقوم بإشراك الطلبة في التخطيط للدرس، لتحقيق أهداف واضحة في أذهانهم من خلال الوسيلة.				
4	أحرص على إشراك الطلبة في اختيار الوسيلة التعليمية.				
5	أنوع في الوسائل التعليمية التعليمية لمراعاة الفروق الفردية بين المتعلمين.				
6	أعرض الصور المرئية المثيرة لجذب انتباه الطلبة، وإثارة اهتمامهم.				
7	أجعل طلابي يستمعون إلى التسجيلات الصوتية لإثارة حب الاستطلاع، والانتباه لديهم.				
8	أعرض الأهداف الخاصة بالدرس على السبورة الطباشيرية.				
9	أحرص على استخدام الوسيلة التعليمية في الوقت المناسب.				
10	أقوم بتقسيم الطلبة إلى مجموعات عند عرض الوسيلة التعليمية.				
التقويم					
1	أحرص على إشراك الطلبة في تقويم الوسيلة التعليمية التي تم استخدامها.				
2	أتحقق من أن الوسيلة قد أعطت صورة واضحة وحقيقية عن الأفكار التي تعرضها.				
3	أتحقق من أن الوسيلة التعليمية قد عملت على زيادة فهم المتعلمين لموضوع الدرس.				
4	أتحقق من مدى سلامة الوسيلة التعليمية من الناحية العلمية.				
5	أتأكد من ملائمة الوسيلة التعليمية المستخدمة للمرحلة العمرية للطلبة.				
6	أتحرى ما إذا كانت الوسيلة التعليمية تستحق ما بذل من وقت وجهد في إعدادها واستخدامها.				
7	أتحقق من مدى مراعاتي للفروق الفردية لدى الطلبة عند إعدادي واستخدامي للوسيلة التعليمية.				
8	أتأكد من مدى ملائمة الوسيلة التعليمية لميول المتعلمين واتجاهاتهم ومهاراتهم.				
9	أقيم درجة استفادة الطلبة من الوسيلة التعليمية، ومدى تحقيقها لأهداف الدرس.				
10	أستفيد من تقييم الوسيلة التعليمية المستخدمة في تحسين استخدامها في المرات القادمة.				

ثالثاً: معرفة معلمي اللغة الإنجليزية بالتعلم القائم على الدماغ:

أرجو وضع (/) في المكان الذي تراه مناسباً:

م	الفقرة	نعم	غير متأكد	لا
1	تلعب طريقة تعلم الطلاب دوراً مهماً في البيئة التعليمية.			
2	تتفاعل أجزاء كثيرة في جانبي الدماغ معاً وارتباط عملياتي معقد لحدوث عملية التعلم.			
3	تحدث عملية التعلم عند وجود مثير للدماغ.			
4	تنشط القراءة الصامتة الفصوص الأمامية من الدماغ.			
5	أثناء عملية التمييز بين الكلمات ومعالجة المعلومات يحدث تفاعل معقد بين جانبي الدماغ.			
6	يتسم الدماغ بقدرته على الاكتشاف والفهم وتحديد المعاني.			
7	ترتبط عمليتي التعلم والتذكر ارتباطاً وثيقاً ولا يمكن عزلهما فكل منهما تؤثر وتتأثر بالعملية الأخرى.			
8	التعلم الفعال يعتمد بدرجة كبيرة على مدى فهم الفرد لبنية العقلية الفريدة.			
9	التنوع وإثراء بيئة التعلم يسهم في جذب انتباه المتعلمين وتنشيط أدمغتهم.			
10	يتميز الدماغ البشري بالمرونة والتغير باستمرار طوال الحياة.			
11	مواقف التهديد والخوف والاحراج تجعل الدماغ في حالة استنفار.			
12	يختلف الدماغ البشري من انسان لآخر.			
13	يتحسن جانبي الدماغ الأيمن والأيسر كلما تعرض المتعلم إلى مواقف وخبرات تعليمية جديدة.			
14	يفقد دماغ المتعلم المعنى المطلوب إذا كانت الخبرات التعليمية التي يتعرض لها أقل أو أعلى من مستواه.			
15	ينمو الدماغ ويتطور عن طريق التفاعل والتعاون مع الآخرين.			
16	تتحسن السعة الدماغية كلما أصبح المتعلم أكثر نضجاً.			
17	يستطيع الدماغ أن ينمذج الخبرات لتسهيل الفهم وإدراك المعنى.			
18	يتميز كل متعلم عن غيره في تكوين دماغه وخبراته وقدراته وسعته.			
19	يتعامل الجانب الأيمن من الدماغ مع المواقف البصرية.			
20	يتعامل الجانب الأيسر من الدماغ مع الزمن اللازم لإنهاء مهمة معينة.			
21	يستطيع المتعلم أن يتعامل مع كل المواقف التعليمية.			

أشكركم لحسن تعاونكم

Appendix (3): List of arbitrators

N.	Name	Workplace
1	Dr. Jamal Nafea	Al Quds University - Abu Dis
2	Mr. Nassar Maqbool	South Hebron Directorate
3	Mr. Maha Muhaisen	North Hebron Directorate
4	Mr. Hassan Karbelah	Central Hebron Directorate

5	Mr. Mohammed Rabaa	Abu Njeim Elementary coeducational School
6	Mr. Mutassim Al Awawda	Dokor Al Hadab Elementary School for Boys
7	Mr. Hazem Halayqa	Dokor Al Arroub Secondary School
8	Mr. Odwan Abu Fara	Omar Ahmed Al Tamimi Secondary School for Boys
9	Mr. Yacob Tanina	Al Sharia school - Hebron
10	Mr. Emad Abu Turki	Al Sharia School - Hebron

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