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The Problems that Encounter 12th Grade Students in Bethlehem Governmental Schools in Recognizing and Producing Conditional Sentences

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Faculty of Graduate Studies

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This dissertation is dedicated

To my parents To my wife and daughter 'Jana' To my sisters and brothers To my father and mother in law To my sisters and brothers in law To my teachers To my university colleagues To my supervisor To the blood of the martyrs

To the struggles of the prisoners

To Palestine

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Abstract

The current study aimed to investigate the problems that encounter 12th grade (Tawjihi) students in Bethlehem governmental schools in recognizing and producing conditional sentences. It also aimed to investigate the influence of age, gender and streams variables on recognizing and producing the conditional sentences. The study was conducted in the academic year 2012-2013 at the end of the first semester. It tackled 100 EFL students from the second secondary grade. Two instruments were used to examine the conditionals: a questionnaire and an achievement test.

The study aimed to answer the following questions: How well have the second secondary students acquired the conditional sentences at the recognition level? What types of difficulties do they encounter in recognizing the conditional sentences? How well have they acquired the conditional sentences at the production level? What types of difficulties do they encounter in producing the conditional sentences? Do gender, age, and stream variables influence the students' performance in recognizing and producing the conditional sentences?

Findings showed that students face difficulty when producing Type Two and Type Three conditions. It also showed that males did better than females in recognizing and producing conditional sentences. Also, the scientific stream did better in recognizing and producing conditional sentences.

In the light of the results of the study, it is recommended that researchers should conduct similar studies on the same topic in other areas in Palestine and at different stages. Adjustments should be made by the Ministry of Education in Palestine on the tasks of the textbook which target conditionals including translation. Teachers should focus on translation when introducing conditionals. Teachers should use techniques that encourage students to use conditionals in their speech and writings.

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الملخص

هدفت هذه الدراسة إلى الكشف عن المشاكل التي تواجه طلاب الصف الثاني عشر (التوجيهي) في مدارس بيت لحم الحكومية في التعرف على الجمل الشرطية وتكوينها. كما هدفت الدراسة إلى الكشف عن تأثير متغيرات العمر والجنس والفرع (العلمي أو العلوم الانسانية) في تكوين و معرفة الجمل. وقد أجريت هذه الدراسة في نهاية الفصل الدراسي الأول من العام الدراسي 2013/2012. حيث تم إجراء الدراسة على عينة من الطلاب الذين بلغ عدهم 100 طالب مع العلم بأن الدراسة قد استهدفت الطلاب الذين يدرسون اللغة الانجليزية كلغة المدين أحنية. وقد التعريبي في معرفة الخراب والعلوم الانسانية) في تكوين و معرفة الجمل. وقد أجريت هذه الدراسة في نهاية الفصل الدراسي الأول من العام الدراسي 2013/2012. حيث تم إجراء الدراسة على عينة من الطلاب الذين بلغ عدهم 100 طالب مع العلم بأن الدراسة قد استهدفت الطلاب الذين يدرسون اللغة الانجليزية كلغة أجنبية. وقد استخدم الباحث وسيلتين أساسيتين لفحص مستوى الطلاب في معرفة وتكوين الجمل الشرطية وهما: إجراء السبيان وعمل اختبار تحصيلي. وتمحورت الدراسة في الإجابة عن الإسئلة الآتية:

- 1- ما هو مستوى طلاب الصف الثاني عشر في مدارس بيت لحم الحكومية في معرفة الجمل الشرطية?
 - 2- ما نوع المشكلات التي تواجه الطلاب في معرفة الجمل الشرطية?
 - 3- ما هو مستوى الطلاب في تكوين الجمل الشرطية؟
 - 4- ما نوع المشكلات التي تواجه الطلاب في تكوين الجمل الشرطية؟
 - 5- هل يؤثر كل من الجنس والعمر والفرع الدراسي في معرفة وتكوين الجمل الشرطية؟

وقد اظهرت نتائج الدراسة أن الطلاب يواجهون مشكلة في تكوين النوع الثاني والثالث من أنواع الجمل الشرطية. كما اظهرت أن مستوى الذكور كان أفضل من الإناث في تكوين الجمل الشرطية، بلإضافة إلى أن مستوى الفرع العلمي كان أفضل في تكوين الجمل الشرطية. وفي ضوء النتائج خرجت الدراسة بعدد من التوصيات منها:

- عمل در اسات مشابهة عن الموضوع ذاته في مناطق أخرى في فلسطين ومر احل أخرى.
- 2- أن تقوم وزارة التربية والتعليم بإجراء تعديلات على التمارين التي تتناول الجمل الشرطية في الكتاب.
 - 3- أن يتم التركيز على الترجمة عند تقديم الجمل الشرطية من قبل المعلمين.
 - 4- أن يستخدم المعلمون وسائل تشجع الطلاب على توظيف الجمل الشرطية في محادثاتهم وكتاباتهم.

Chapter One: Introduction

The second secondary or the Tawjihi stage in Palestine is considered to be a very critical one. It is a decisive period for second secondary students' bright future. Therefore, many people look at this stage as the gate for their future life. It's after this period that the Tawjihi students determine what to be and try to fulfill their ambitions. It is therefore considered by many people as the period that leads either to success or failure. Since the case of the Tawjihi students concerns us, it was a must for researchers to put solutions for every problem that encounters them in order to enable them to move better into their academic success. Also, because the Tawjihi English Exam matters parents and teachers, it has also been a must for researchers to see what topics in English the Tawjihi students fail in.

One of the teaching problems that EFL students face in grammar is forming and using the conditional sentences. What makes conditional sentences an interesting area of study is the difficult structure that goes beyond the direct meaning to the indirect meaning. It also needs a deep thinking of comprehension and explanation because it depends on imaginative, hypothetical and unreal situations. So, learners need good skills of language to deal with conditionals.

1.1 Theoretical Background

In his paper "The acquisition of conditional sentences by Arab learners of English" Fareh (2005) investigated the performance of Arab learners in recognizing and producing conditionals. He found that the performance of recognition is better than that of production. Students were unable to relate form to function, implicit conditionals were the most difficult, tense time relationship were difficult for them. Students mismatched between verb forms in the two parts of the conditional sentence and they were also unaware of the alternate forms of conditionals.

Sultan (2011) investigated the problems that face advanced Iraqi university students in translating English conditionals into Arabic. He found the following results: first, students "translate the coordinating devices neglecting the condition implied. For example, they should have translated the English sentence (Read your اذا تقرأ دروسك فان يلومك) into its equivalent in Arabic (اذا تقرأ دروسك فان يلومك) أحد) but they translated it into (أحد). Second, they neglected the implied conditions in the restrictive modifiers (adjective and relative pronouns). For instance, the translation of the English sentence (Brave soldiers die) is (اذا كان الجنود الجنود) (شجعاناً فإنهم يموتون). Third, they neglected the implied condition when translating English noun phrases into Arabic. For example, the translation of the English sentence (An educated man would have answered differently) is (لو كان رجلا متعلماً لأجاب بطريقة أفضل) but it was translated as Fourth, they neglected the implied condition of (الرجل المتعلم ممكن أن يجيب بصورة مختلفة). mind-condition compose. For instance, the translation of the English sentence (our teacher doesn't mind being late.) is (ایان نتأخر فإن مدرسنا لا یمانع) but it was translated as (لا يمانع مدرسنا في التأخير). Fifth, they neglected the implied condition in the non-finite (v-ing) clause. For example, the translation of the English sentence (thinking deeply leads to successful steps) is (اذا كان التفكير عميقاً فإنه يقود إلى خطوات ناجحة), but it was translated as (التفكير العميق يقود الى خطوات ناجمة). Sixth, they were unaware of the exact uses of each type of the conditional and they mix between them. For example, the translation of the English sentence (I shall call you, if I worked late.) is (سأتصل بك اذا) and this lacks a (اتصل بك عند عملي متأخراً), but it was translated as condition.

1.2 Statement of the Problem

Many studies agreed on the existence of difficulties that face the learners (both EFL/ESL students and even natives of the language) who study conditional sentences which will be revealed in the literature review of this study.

EFL student can't recognize the different types of conditionals (for example type two and three conditions), which leads to a more serious problem. Students at 12th grade in governmental schools in the city of Bethlehem can't produce conditional sentences efficiently, and they can't recognize the forms of the conditional sentences easily. They face a serious problem in understanding the meaning of the conditionals. So, teaching conditionals at school has become a big challenge for the teacher.

Researchers make a big effort to find ways to improve solutions for these problems that face our students when learning the English language. Thus, it is very important to figure out the errors that students face in understanding the form and the meaning of the conditionals in order to give recommendations to the ones who are responsible for teaching or designing the curriculum.

1.3 Purpose of the Study

This study aims to:

- 1. Investigate the problems that the second secondary students in Bethlehem governmental schools face in conditional sentences.
- Investigate the influence of age, gender and streams variables on recognizing and producing the conditional sentences.

1.4 Significance of the Study

Since English grammar is a very important area in EFL classes, this study is the first of its kind to be conducted in Palestine that deals with conditional sentences which are considered as a problematic area in this field.

This study is highly significant because it reveals the problems that our students face in learning the conditionals. It is necessary to find solutions that can help the teachers and the Ministry of Education to understand the real problems that encounter our students in recognizing and producing the conditional sentences, so they can develop new ways and techniques in teaching conditional sentences.

1.5 Research Questions

This study tries to answer the following research questions:

- 1. How well have the second secondary students in Bethlehem governmental schools acquired the conditional sentences at the recognition level?
- 2. What type of difficulties do they encounter in recognizing the conditional sentences?
- 3. How well have the second secondary students in Bethlehem governmental schools acquired the conditional sentences at the production level?
- 4. What type of difficulties do they encounter in producing the conditional sentences?
- 5. Does the gender variable influence the students' performance in recognizing and producing the conditional sentences?
- 6. Does the streams variable influence the students' performance in recognizing and producing the conditional sentences?

7. Does the age variable influence the students' performance in recognizing and producing the conditional sentences?

1.6 Research Hypotheses:

1. It is hypothesized that the second secondary students in Bethlehem government schools don't show weakness in recognizing English conditional sentences.

2. It is hypothesized that the students do not know the grammatical structures of the three types of English conditional sentences.

3. It is hypothesized that the students don't show weakness in producing correct English conditional sentences.

4. It is hypothesized that the students are not aware of the different functions of English conditional sentences.

5. It is hypothesized that there are no significant differences between males and females students in recognizing and producing English conditional sentences.

6. It is hypothesized that there are no significant differences between the scientific stream and the literary stream students in recognizing and producing English conditional sentences.

7. It is hypothesized that there are no significant differences in recognition and producing English conditional sentences due to age.

1.7 Limitations of the Study

This study is limited to the second secondary students of EFL classes of Bethlehem governmental school in the academic year 2012 -2013. So, the results could not be generalized because they are restricted to the participants, time and place of the study. The students will be given an achievement test and a questionnaire in order to analyze their achievement and find out the results that the study investigated.

1.8 Definition of Key Words

1. Recognition: The act when students notice and acknowledge the different forms of the two parts of the conditional sentence.

2. Production: The ability to produce the intended meaning of the conditional sentence.

3. Type I (First Conditional): it is used to talk about real possible situations. It is formed by using If + present simple and will + infinitive. (Beare, 2013)

4. Type II (Second Conditional): it is used to talk about unreal or impossible things "and it provides an imaginary result for a given situation". It is formed by using If + past simple and would + infinitive. (Beare, 2013)

5. Type III (Third Conditional): it is used to describe "a hypothetical result to a past given situation". It is formed by using If + past perfect and would + perfect infinitive (have done). (Beare, 2013)

6. Counterfactual conditional sentences:

Yale (2004) defines counterfactual sentences as "convey negative implications with regard to what is expected in the if-clause. They present a consideration of a situation that is assumed not to have taken place." the counterfactual sentences are used when talking about "what would have happened if...?" the situations are unreal and impossible.

7. Real conditionals: "clauses refer to the future; since the modals are commonly used for future reference, they appear frequently in such sentences. Will is the most common, but other central modals occur in real conditional clauses as well". (Gramley & Patzold, 2004) 8. Unreal conditionals: "sentences differ from real ones only in as much as they express less likelihood. The use of the past tense therefore fits very well as a marker of remoteness". (Gramley & Patzold, 2004)

9. Implicational conditionals: "states a relationship which the speaker logically supposes to be true. It is a basically a variant of the real condition." (Gramley & Patzold, 2004)

1.9 Summary

This chapter discussed two previous studies that targeted the performance of conditionals for Arab students. It also introduced the aims of the study which investigated the problems that face second secondary students (Tawjihi) and the influence of age, gender, and streams in recognizing and producing conditional sentences. This study doesn't neglect the students' opinion especially about the role of the teacher and the textbook in helping them understand conditional sentences. This study is important because it deals with one of the most important grammatical subjects that students' face. This study also tries to answer seven research questions that deal with recognizing and producing conditional sentences and it is limited to secondary students of EFL clauses of Bethlehem government schools in the first semester of the academic year 2012-2013. Furthermore, some definitions of key words were explained. The next chapter will deal with literature review of some studies which investigated conditional sentences.

Chapter Two: Literature Review

This chapter introduces the previous studies that discussed English conditional sentences from five aspects: the form and the meaning of conditionals, the relationship between the two clauses, the problems and difficulties of conditionals, conditionals connectors and the use of conditionals in spoken and written English

2.1 The Form and the Meaning of Conditionals

This study deals with conditional sentences in the English language. Conditional sentences are classified in English into four types. The first type is Real Conditional Clause that refer to the future and *will* is commonly used in it. The second type of conditional sentences is the Unreal Conditional Sentences that use the past tense to express less likelihood as a marker of remoteness. The third type is Counterfactual Conditional Sentences, which "are used to say something about the past" for a "hypothetical state of affairs" and they express "the likelihood of something given the right conditions in the past". The counterfactual means contrary to the fact because "the past is not repeatable and cannot be changed". The last type of conditional sentences is the Implicational Conditionals. They are to be true for a real condition and the truth is not definitively known. (Gramley and Patzold, 2004).

Murphy (1994) explained the conditionals using examples such as: *If I find it (the lost watch), I'll tell you.* In the previous example, there is a "real possibility that she will find the watch." In the next example, there is a different situation: *If I found a wallet in the street, I'd take it to the police.* In this situation, there is no real possibility but "she is imagining the situation and doesn't expect to find a wallet in a street". The following example describes an imaginative situation in the past: *If I had known you were in hospital, I would have gone to visit you.* "The real situation was that she didn't know he was in hospital."

Cowan (2008) introduced the form of the conditional sentence which consists of two clauses: the main clause or the result clause which "contains a proposition stating what happened if the conditioned is fulfilled" and the if-clause, subordinate clause or the condition. Cowan (2008) also divided conditional sentences into two major categories: real conditional sentences and unreal conditional sentences.

In the same way as Cowan, Leech (2004) divided conditional sentences into two main groups: real conditions which have truth-neutral in both the main clause and the dependent clause. He used four forms of real conditions:

1. Simple present and simple present, for example: "*If you are happy, you make others happy*."

2. Simple past and past progressive, for example: "If James told you that last night, he was lying."

3. Simple present and present perfect, for example: "*If my son is genius, I've underestimated him.*"

4. Simple past and will 'future', for example: "*If they left at nine, they will certainly be home by midnight.*"

According to Leech (2004) the unreal conditions express hypothetical meaning that doesn't take place in the real world but in the imaginary world. The unreal condition is formed by using: past tense in the conditional clause and would + infinitive in the main clause and it is possible to derive it from the real conditions, for example:

- If my son were genius, I'd have underestimated him.
- If they had left at nine, they would certainly be home by midnight.

The hypothetical meaning has a negative truth-commitment in the unreal conditions unlike the real conditions which have a positive truth-commitment or

neutrality, for example: *It would be laughable if Septimus were in love*. In the previous example, Septimus in reality is not in love, so this implies a negative truth commitment. The hypothetical meaning could be found in the dependent clause (if-clause) of the imaginary past events and it is contrary to the fact, for example: *"If your father had caught us, he would have been furious."* In the previous example, the if-clause is contrary to the fact because factually he didn't catch them. (Leech, 2004)

Another kind of classification is done by Celce-Murcia & Larsen- Freeman, (1999). Conditional sentences are classified into three types. The first one is factual conditionals which are divided into two: timeless and time-bound. Timeless represents generic conditionals that "express relationships that are true and unchanging". Moreover, the habitual conditionals "express a relationship that is not bounded in time" and it "is based on habit instead of physical law". They also "express either past or present relationships that are typically or habitually true". The time-bound factual conditionals are divided into two: the implicit and explicit inference factual conditionals. The implicit inference conditionals "express inferences about specific time-bound relationship". The explicit inference conditional has "no strict parallelism of tense, aspect or modal in both causes". The second type is future (predictive) conditional sentences. They are divided into two categories: strong condition and result, and weakened condition or result. Strong conditions and results "express future plans or contingencies". The weakened condition or result is used for insufficient certainty which uses a "weaker modal of prediction such as may and should" in the result clause. The third type of the conditional is imaginative conditional sentences. This type of conditional sentences is the most difficult and problematic. It is divided into two types: hypothetical and counterfactual. Hypothetical conditional sentences express "what the speaker perceives to be unlikely yet possible events in the if-clause and it can refer to the future or present". However, counterfactual conditional sentences express "impossible events or states in the if-clause". (Celce-Murcia & Larsen- Freeman, 1999)

The following table classifies the conditional sentences and their examples. (Celce-Murcia & Larsen- Freeman, 1999)

			Examples
		Generic	e.g: If oil is mixed with water, it floats.
factual	timeless	habitual	e.g: <i>Present</i> : If I wash the dishes, Sally dries them. <i>Past</i> : If Nancy said, "Jump!" Bob jumped.
	time- bound	implicit	e.g: If smog can be licked in L.A., it can be licked anywhere.
		explicit	e.g: If someone's at the door, it must be Peter.
Future	Strong		e.g: If Steve comes to class, he will get the answers to the quiz.
	Weakened		e.g: If you finished your vegetables, I may buy you an ice-cream cone.
	Hypothetical		e.g: If Joe had the time, he would go to Mexico.
Imaginative	counterfac	ctual	e.g: <i>Present</i> : If my grandfather were alive today, he would experience a very different world. <i>Past</i> : If my grandfather had still been alive in 1996, he would have been 100 years.

Table 1: Conditional classification of Celce-Murcia & Larsen- Freeman, 1999.

2.2 The Relationship between the Two Clauses

Funk (1985) summarized the relationship between the two parts of the conditional sentence as a logical relationship and he called them "the protasis (logical antecedent) and the apodsis (logical consequent)". Funk (1985) categorized the logical relationship as the following:

- Protasis Vs apodosis equals necessary but not sufficient condition. He said that the protasis is "necessary but not sufficient condition for the existence of the conditional event". For example: *If you use proper grammar, she will understand*. In the example, the use of proper grammar is necessary but not sufficient condition because there are other conditions that may help her to understand such as "her attentiveness, the use of a language she understands, etc."
- 2. Cause and effect or effectual conditional relationship. E.g. *If she did not understand, you did not use proper grammar, and this like If A exists, this causes B to exist.*
- 3. Non-effectual or non-consequential, for example: *If he travels a lot, this is not surprising*. It provides a comment rather than a consequential relation.
- 4. The if-clause (protasis) which is a conditioning event and the main clause (apodosis) which depends on the truth of the conditioning event.

In English, the order of the protasis and the apodosis doesn't matter. Moreover, the protasis can come either before or after the apodosis, for example: *If we cross the river here, we may lose our food*. Also, the same example could be: *We may lose our food if we cross the river here*. (Odlin, 1994) The relationship between the antecedent and the consequent is that the previous one determines what happens in the consequent. However, there are some statements that "there is no direct link between the main clause and the if-clause and often the if-clause can be omitted without this affecting the meaning of the main proposition" and so "the if-clause provides some motivation for the utterance" and this is called utterance- conditional and the role of the if-clause in semantics is "peripheral". Haegeman (1984)

2.3 The Problems and the Difficulties of the Conditionals

Most of the studies agreed on the existing of difficulties and problems when teaching or learning conditional sentences in the English language. Covitt's (1976) study showed that the serious problems pertaining the conditional included four aspects: oversimplified explanations, form, meaning and time tense relationship. (cited in Norris, 2003)

Norris (2003) considered conditional sentences as "a big obstacle" that faces ESL/EFL teachers and students of English. Norris (2003) justified this complexity found in conditionals for the following reasons:

- 1. Conditional sentences lie in the dependence of one circumstance on the occurrence of another.
- 2. The variety of possible meanings includes areas of cognitive reasoning, logical argument, psychological intent and desirability, and semantic nuances associated with real, counter factual or hypothetical events contingent on, inferred form, or caused by one or more of these events.

Celce-Murcia & Larsen- Freeman (1999) summarized the difficulties and problems of learning and teaching conditionals and admitted that "ESL/EFL textbooks and reference grammars typically provide highly over simplified information". Moreover, ESL/EFL students have a problem in associating past tense with past time and they find it hard to understand that the sentences such as <u>If I had the money, I</u> <u>would take the vacation</u> is in the present not in the past, so they are "confused because they hear and read many types of conditional sentences that are not included in the three structures usually taught".

It was found by Covitt (1976) that conditional sentences ranked fifth in the most five serious problems (after articles, prepositions, phrasal verbs and verbals). Conditional sentences in English are syntactically categorized as complex sentences. (Celce-Murcia & Larsen- Freeman, 1999)

In the same way, Declerck and Reed (2001) agreed that there is an obvious difficulty to give exact definition of "conditional meaning or conditional interpretation". Moreover, linguists found that it is hard and difficult to determine basic categories of conditional sentences". (Funk, 1985)

Gorden (1985) didn't attribute the difficulty of acquiring conditional conditionals to the structural or cognitive complexity, but to the form-function concerned. The asymmetry between form and function may cause serious difficulties for L2 students, so they study on conditional needs a theory ground work that stresses both syntactic and semantic features.

Three points in teaching conditionals were summarized by Kharma and Hajjaj (1997): "forms of the verbs, the time reference of the verbs, and the meaning of the condition in each of the patterns." They also suggested that the difficulty of conditionals is due to the fact that "the forms of the two verbs in the two clauses depend on each other" and that both verbs contribute to the semantic meaning of the sentence.

There are five functions for conditional sentences mentioned by Hsu (2003) (cited in Figueroa and Garate, 2006) and these are "predictions, discussing past mistakes, expressing dreams, giving advice and making apologies."

Celce- Murcia and Larsen Freeman (1999) also claimed that "tense-aspect system", the "modal auxiliaries" and "negation" are the prerequisites to acquire conditionals.

Furthermore, Schwenter (1998) summarized the results of past studies and commented that not only conditional mistakes but also verbal tense and mood alternation contribute to the interpretations. These points are: temporally and tense, hypothetically and mood and modals and verbs.

Mindt (1996) mentioned that conditionals are regarded as problematic structures, both in first and second language acquisition because of their complexity and particular tense uses from other sentential patterns.

The existence of the problem of conditional sentences is due to the relationship between conditionals and conditional probability. In conditional case the interpretation of probability is elusive. So, the problem is focused on the semantic term rather than the form. Kaufmann (2002) differentiates between predictive conditionals and counterfactual. He summarized that predictive conditionals come before the fact and the counterfactual conditionals come after the fact. (Kaufmann, 2002).

Inchaurralde (2008) explained counterfactual conditional sentence as "a sentence with the form p implying q in which the antecedent p is false. This definition, is very straightforward from a logical point of view." He also admits that this form has difficult application in most examples of natural language because

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"there are many possible interpretations of the truth value of a given statement". (cited in Hornero, Luzon & Murillo, 2008).

Hornero, Corsico, Luzon etc, (2008) agreed that applying conditionals in natural language is difficult especially for the counterfactual conditionals because "there are usually many possible interpretations of the truth-value of a given statement". Counterfactual sentence is explained as "a sentence with the form p implying q in which the antecedent p is false".

In his study "the translation of English conditional clauses into Arabic: A pedagogical perspective" Sultan (2011) conducted his study on 4th year university students at University of Basra in Iraq. He found that students committed many mistakes in translating English conditional clauses. He admitted that students "are still incapable of identifying conditional clauses".

Fareh (2005) in his study "The acquisition of conditional sentences by Arab learners of English" found that the recognition of the form, meaning and function of conditionals is medium by Arab English students (recognition of form 63.5%, meaning 55.6% and function 49.7%). On the other hand, he found that "59% of them were unable to produce correct conditional sentences". In both recognition and production, Fareh (2005) found some problems that students encounter in conditional sentences and these problems were:

- 1- Students couldn't recognize the "sentences that have no overt markers".
- 2- Students have difficulty in recognizing the conditional sentences with markers other than *if*.
- 3- They couldn't "recognize relates to conditional sentences beginning with *Were* and *Had*."

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- 4- They have troubles in "Identification of conditional sentences marked with the subordinator *if* ".
- 5- Students were unable to "relate verb tenses to their intended times".
- 6- They "couldn't understand the meaning of conditional when a modal auxiliary like *should* was used in the if clause".
- 7- They were unable to "identify the proper function intended in the context".
- 8- They have misused "verb forms in either the if-clause or the main clause".
- 9- They were unable to "produce implicit conditional sentences".
- 10- They have ignored the "verb forms in the if-clauses type zero".

11- The subjunctive 'were' did not exist in unreal condition.

2.4 Conditional Connectors:

Many conditional connectors are used in conditional sentence such as If, unless, even if, until, as (so) long as, assuming or supposing, in case, and only if. And the most frequent one is *if* and the least frequent one is *only if*. These connectors are used to connect three types of conditional sentences. Zero conditional form which describes universal statements like facts, rules and certainties. First conditional form which expresses a hypothetical situation that is probably true, and it is also called potential or indicative conditionals. Second conditional form which describes less probable situations for stating preferences and imaginary events. Finally, the third conditional form describes impossible past events or contrary-to-fact. (Narayanan, Liu and Chouldhary, 2009) Celce-Murcia & Larsen- Freeman, (1999) talked about conditional connectors: if, if not, only if, unless, even though, even if, and whether. They compared the first four into two sets: (a) affirmative connectors and they are if (open unmarked conditions) and only if (exclusive marked conditions), (b) negative connectors which are if ... not (open unmarked conditions) and unless (exclusive marked conditions).

Celce-Murcia & Larsen- Freeman (1999) described "even though" as a connector which "expresses a concession" and "it is an emphatic form of although" while "even if" is an "explicit inference conditional and it is an emphatic counterpart of if."

They also explained the connector "whether...or not" as an adverbial subordinator which "indicates the condition that can be explicitly eliminated from the playing any role in determining the outcome expressed in the result clause."

In the same way, Azar (2002) explained some uses of conditional connectors such as (if, whether or not, even if, in case in the event that, unless, and only if). *If* and *unless* which equals *if not*. *Whether or not* is used to express "the idea that neither this condition nor that condition matters; the result will be the same". *Even if* is used to give "the idea that a particular condition does not matter. The result will not change". *In case* and *in the event that* are the same but in the event that is more formal. They are used to express "the idea that something probably won't happen, but it might". And they mean "if by chance this should happen". *Only if* is used to express "the idea that there is only one condition that will cause a particular result".

Some conditional connectors were used more than others when using conditional sentences. According to Gramely and Patzold (2004), the use of "if" as a conjunction for the conditional clauses is the most common.

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2.5 The Use of the Conditionals in Spoken and Written English:

According to many studies on conditionals, the use of English conditionals in spoken and written English was limited and restricted to a few cases. Hawng (1979) made a corpora study on the most frequent syntactic patterns of English conditionals for both spoken and written cases. According to the three types, he found that:

- Using type 1 (If + present, will infinitive) were 10.9% in speech and 12.5% in writing.
- Using type 2 (If + past, would infinitive) were 10.2% in speech and 10% in writing.
- 3. Using type 3 (If + had + past participle, would have + past participle) were 3.8% in speech and 3.3% in writing. (Murcia and Freeman, 1999)

So, conditionals were used more in speech than writing.

Narayanan, Liu and Chouldhary (2009) said that 8% of sentences in a typical document are conditional sentences. They also found that 8.6% of sentences which are used in cell phones are conditionals, 5% in audio systems, and 8.29% of sentences are conditional sentences in Medicine. (Narayanan, Lin and Chouldhary, 2009).

Furthermore, Narayanan, Liu and Chouldhary (2009) analyzed conditional sentences and found the percentage of using the conditional connectives. 6.42% of the sentences used "if", 0.32% used "unless", 0.17% used "even if", 0.10% used "until", 0.09% used "as (so) long as", 0.04% used "assuming or supposing", 0.04% used "in case" and 0.03% of the sentences used "only if".

2.6 Teaching Conditional Sentences

In order to teach conditional sentences, Fulcher (1991) said that there should be "a link between student purpose and the need to learn particular conditional forms" and so teachers should "select which conditionals to teach depending on the most frequent forms" and teachers should also teach the context in which conditionals occurs. (cited in Norris, 2003)

Maule (1988) believes "that particular teaching must include an emphasis on the meaning of conditionals as they are actually used, not just their form" because he thinks that this way of teaching prepares "students for the usage they will encounter". In addition, Celce- Murcia and Larsen- Freeman (1999) suggest that teachers should teach tense-aspect system, modals and negation before teaching conditional sentences. (cited in Norris, 2003)

2.7 Summary

Many researchers talked about the form and the meaning of English conditional sentences. Gramley and Patzold (2004) classified them into four, real conditionals, unreal conditionals, counterfactual conditionals and the implicational conditionals. Others such as Cowan (2008) and Leech (2004) divided them into two main categories, real and unreal conditions. However, Celce-Murcia & Larsen-Freeman (1999) mentioned three major categories which are factual conditional, future conditionals and imaginative conditionals.

It is also important to talk about the relationship between the two parts of the conditional sentences. Funk (1985) explained four relationships between them: (1) Protasis versus apodosis. (2) Cause and effect relationship. (3) Non-effectual or non-consequential. (4) The if-clause and the main clause.

According to many researchers, conditional sentences are considered a serious problem and difficulty for the learners. Most of them referred that to meaning and tense change such as Covitt's (1976), Norris (2003), Celce-Murcia & Larsen- Freeman (1999) etc.

The researcher found two important Arabic studies which discuss English conditionals sentences. One was conducted by Sultan (2011) and he found that students were incapable of identifying conditional clauses. And the other one was done by Fareh (2005) and he found that Arab learners had low achievements in recognizing and producing conditionals.

There are many conditional connectors used in English conditionals for example "if, only if, unless, even though etc." and "if" is the most used one in English according to Gramely and Patzold (2004), and Narayanan, Liu and Chouldhary (2009).

Conditionals have been used in both spoken and written English. However, this usage is little compared to other grammatical forms. In their book, Celce-Murcia & Larsen- Freeman (1999) had a study for Hawng (1979) in which he found that conditionals were used more in speech than writing but in few numbers in both cases.

Chapter Three: Methodology

3.1 Population and Sampling

The population of this study was the EFL second secondary students who study English at Bethlehem governmental schools in the year 2012-2013. The sample was chosen randomly from three different secondary schools, two of which are for boys and the other is for girls. Both schools consist of literary and scientific streams of second secondary classes. The subjects of the study are one hundred students; they are fifty males and fifty females who are native speakers of Arabic. They have the same educational and cultural background.

3.2 Instruments of the Study

There are two measures to examine the conditionals that the students acquired after they took them by their teachers at school:

- In achievement test: students will have this test after having the conditionals in their classes by their teachers at the end of the first semester. The test will include two sections. The first one is the recognition section which contains twelve multiple choice sentences, four sentences on each type of conditional. The second one is the production section that contains a translation test. There will be twelve Arabic sentences four for each type of conditionals.
- 2. A questionnaire: the students will have a questionnaire that examines their age, gender and stream. Moreover, it will contain five open questions for further information about conditional sentences.

3.3 Collecting Data:

Data were collected through three procedures. The first procedure was a questionnaire that was designed to assess the students opinion about conditional sentences through five questions about the importance of conditionals, using conditionals in conversation, the teacher, the book and if they give enough time when they study them. The next procedure that was used to collect data was a multiplechoice test of twelve sentences on conditionals. The test was designed to assess recognition level. The participants were given twelve Arabic sentences in the third step. This step assessed the production level by using translation procedure.

This study tackled governmental school students of twelfth grade class at Bethlehem city: the literary stream of Beit-Sahour Secondary School for Boys, the scientific stream of Bethlehem Secondary School for Boys and the scientific and the literary stream of Bethlehem Secondary School for Girls. The total number of students was 100 students from three pervious schools which are the biggest and most important schools in Bethlehem area. The sample was taken arbitrarily; 50 of the students are males (25 literary and 25 scientific) and the other 50 are females (25 literary and 25 scientific).

3.4 Setting

The current study was conducted in EFL setting where all the participants were Arab students who belonged to three secondary schools in Bethlehem city. The study tackles 100 participants from the second secondary grade and they were chosen arbitrary from the three schools which are: Bethlehem Secondary School for Boys, Beit-Sahour Secondary School for Boys and Bethlehem Secondary School for girls. This study was performed after the students finished the course requirements that the study tackles so all the participants were supposed to have finished all the material that discussed the conditionals and besides that they were also supposed to have finished the two-month exams.

3.5 Time Frame

The study was conducted in the academic year 2012-2013 at the end of the first semester. The participants had the tests in November, 2012. The participants were supposed to finish conditionals lessons and have two-month exams. The data was analyzed immediately after that.

3.6 The T-test

This study depended on t-test in analyzing the data in order to find out the mean and the standard deviation.

The t-Test is a test that is used to compare two means for two groups only. In this case, the two groups are recognition and production of the participants. Nunan (1992) defined the t-test as "A statistical producer for testing the differences between two or more means. It is used for estimating the probability that the means have been drawn from the same or different population".

3.7 Variables

Variable was defined by Nunan (1992) as a "property or characteristic which may differ from individual to individual or from group to group." He also added that the independent variable influences and affects the dependent variable.

This study was designed to reveal the problems that 12th grade students in governmental schools in the city of Bethlehem face. The questionnaire and achievement test include variables such as age, gender and stream.

Johnson and Christensen (2012) defined the independent variable as a "variable that is presumed to cause a change in another variable" and here are the independent variables of this study:

1. Age - 17-year students and 18-year students

2. Gender – males and females

3. Stream – scientific stream and the literary stream

Johnson and Christensen (2012) also defined the dependent variable as "a variable that is presumed to be influenced by one or more independent variable". Here are the dependent variables of the study:

1. Yes/No questions and they are five and they deal with:

a. Using conditional sentences is important in conversation in English.

b. Ability to use conditional sentences in conversation in English.

c. The explanation of the teacher helps in understanding the conditional.

d. The textbook helps in understanding the conditional sentences better.

e. Giving enough time when studying conditional sentences.

2. Total correct answers for the recognition test.

3. Total correct answers for the production test.

3.8 Tests Validity

The three different instruments that were used in the study were judged by five experts who were experienced English teachers, and they have been teaching English for more than nine years for the secondary grades. They were asked to make comments and give their evaluations to the tests as they were connected them to the purpose of the study. Their recommendations and suggestions were taken into account and modifications (such as the number of the questions, some grammatical mistakes etc.) were made by the researcher.

3.9 Tests Reliability

The reliability of the three tests of the study was calculated using the Cronbach Alpha Formula, and it was measured to be as the following:

Variables	Reliability Coefficient
Questionnaire	0.74

Recognition test	0.89
Production test	0.66

Table 2: The Reliability of the Three Tests of the Study

A quick look at table 2 shows that the questionnaire test reliability is 0.74 which denotes an acceptable degree of consistency. The recognition test reliability has an excellent reliability at 0.89 which is an acceptable degree of consistency. The analyst attributes this to the nature of the test which was a multiple-choice test that students like more. However, the reliability of the production test is 0.66 and it is close to test consistency.

3.10 Summary

Chapter three introduced the methodology of the study which discussed the population and sampling, the instrument of the study (an achievement test and a questionnaire), collecting data, the setting (Bethlehem governmental schools), time frame (2012), the T-test, variables, tests validity and tests reliability.

Chapter Four: The Findings and the Results

This chapter will introduce the findings and the results only by figures. Students were given three procedures to examine their acquirement of conditional sentences. These procedures started with a questionnaire. Then, they had a recognition test and translation test.

4.1 Questionnaire Results

The questionnaire consists of two parts: the first one requested students to give their age, gender and stream. The following table shows the classification of age for part one of the questionnaire.

Age	Number of students	Gender	Number of students	Stream	Number Of students
		Male	32	Scientific	15
17	65	Male	32	Literary	17
1/	05	Female	33	Scientific	16
		remaie	55	Literary	17
		Male	18	Scientific	10
18	35	Male	Male 18		8
10	55	Esmala	17	Scientific	9
		Female	1/	Literary	8

Table 3: The classification participants' age, gender and stream

The second part of the questionnaire was asked the participants to answer five Yes/No questions about the importance of using conditional sentences in conversation in English, the ability of using conditional sentences in conversation in English, teacher's explanation, textbook, and giving time when studying. Students were asked to answer them in their mother tongue (Arabic language). Table 4: shows the results of these five questions.

Number	Part two questions	stud	ll ents)0)	Girls	s (50)	Boys (50)	
er		Yes	No	Yes	No	Yes	No
1	Using conditional sentences is important in conversation in English	86	14	46	4	40	10
2	Able to use conditional sentences in conversation in English	74	26	31	19	43	7
3	The explanation of the teacher helps you to understand the conditional sentences better	82	18	44	6	38	12
4	The textbook helps you to understand the conditional sentences better	57	43	31	19	26	24
5	You give enough time when you study conditional sentences	60	40	32	18	28	22

Table 4: The results of Yes/No questions

1. Is using conditional sentences important in conversation in English?

According to previous table, 86 out of 100 of the participants said that using conditional sentences is important in conversation in English. 46 out of 50 of girls (92% of girls who participated in the test) said that using conditional sentences is important in conversation and 4 of the girls did not agree on that, while 40 out of 50 boys (80% of boys who participated in the test) agreed that using conditionals is important in conversation and 10 did not agree on that.

2. Do you feel you can use conditional sentences in conversation in English?

Table 4 also shows that 74 out of 100 of the students said that they feel they can use conditional sentences in conversation in English. 43 out of 50 boys (86% of the boys) said that they use conditional and 7 out of 50 boys (14% of the boys) said that they can't use them. Girls were less, 31 out of 50 girls (62% of the girls who participated in the test) said that they can use conditional sentences in conversation in English, but 19 out of 50 girls (38% of the girls) can't use them.

3. Does the explanation of the teacher help you to understand the conditional sentences better?

With respect to the teacher, table 4 shows that 82 out of 100 of the students said that the explanation of the teacher helps them to understand the conditional sentences better. 44 out of 50 girls (88% of the girls) said that teacher helps them and 6 out of 50 girls (12% of the girls) said that the teacher doesn't help, while 38 out of 50 boys (76% of the boys) said that the teacher helps them and 12 out of 50 boys (24% of the boys) said that the teacher doesn't help them.

4. Does the textbook help you to understand the conditional sentences better?

Concerning the textbook, table 4 also shows that 56 out of 100 students said that the textbook helps them to understand the conditional sentences better. 31 out of 50 girls (62% of the girls) said that the book helps them and 19 out of 50 girls (38% of the girls) said that the textbook doesn't help, while 26 out of 50 boys (52% of the boys) said that the textbook helps them and 24 out of 50 boys (48% of the boys) said that the textbook doesn't help them.

5. Do you give enough time when you study conditional sentences?

Finally table 4 shows that 60 out of 100 students give enough time when they study conditional sentences in English. 32 out of 50 girls (64% of the girls) give enough time in studying conditional and 18 out of 50 girls (36% of the girls) don't give enough time, while 28 out of 50 boys (56% of the boys) give enough time in studying conditionals and 22 out of 50 boys (44% of the boys) don't give enough time in studying the conditional sentences.

The following diagram shows the students who said *Yes* for the Yes/No Questions of the questionnaire:

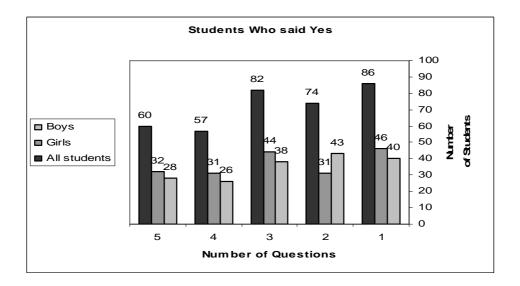


Diagram 1: Students who answered Yes in the Yes/No questions of the questionnaire

4.2 Recognition Results

This section deals with the results of the recognition test by figures. In the recognition test (which focuses on the form of the conditional sentences of the three types), students had to choose the correct answer (correct form) for the correct conditional type. Twelve multiple choice sentences were given, each sentence represents a conditional type.

The following table shows the results of the recognition test for all the participants (100 Students- 50 boys and 50 girls) for both streams: Literary (25 boys and 25 girls) and Scientific (25 boys and 25 girls):

			Girls (or	ut of 50)		Boys (out of 50)				
Sentence number	Correct type	Scienti Correct answers	fic (25) Other answers	Correct Other		Scientific (25) Correct Other answers answers		Correct Other		(100) Total correct answer
1	2	5	20	6	19	21	4	12	13	44
2	2	22	3	13	12	17	8	18	7	70
3	1	25	0	14	11	21	4	18	7	78
4	2	15	10	7	18	5	20	10	15	37
5	2	16	9	5	20	12	13	8	17	41
6	3	16	9	7	18	18	7	12	13	53
7	1	19	6	10	15	13	12	17	8	59
8	1	16	9	8	17	14	11	16	19	54
9	3	18	7	4	21	15	10	14	11	51
10	2	19	6	10	15	19	6	6	19	54
11	3	16	9	8	17	20	5	13	12	57
12	1	18	7	13	12	20	5	22	3	73

Table 5: the results of the recognition test for boys and girls

For sentence one, type two conditional is needed for the correct answer. 44 out of 100 students (44% of the students) chose the correct type which is type 2. 11 out of 50 of the girls had the answer correctly (5 for scientific stream and 6 for literary stream), while boys had 33 out of 50 correct answers (21 for scientific stream and 12 for literary stream).

Regarding to the second sentence, conditional type two is also needed for the correct answer, 70 out of 100 students (70% of the students) chose the correct answer. 35 out of 50 girls had the correct answer (22 for scientific stream and 13 for literary stream). Boys had 35 out of 50 correct answers (17 for scientific stream and 18 for literary stream).

For sentence three, students had to choose type one as a correct answer for the sentence. 78 of all the students (78% of the students) who did the test had the correct answer. From the 78 correct answers, there were 39 girls who had the correct answer divided into 25 out 25 girls from the scientific stream and 14 out of 25 from the literary stream. 39 out of 50 boys also got the correct answer, 21 out of 25 boys were from the scientific stream and 18 out of 25 from the literary stream.

The correct answer for the fourth sentence is type two conditional. 37 out of 100 students (37% of the students) had the correct answer. 22 out of 50 girls (15 for scientific stream and 7 for literary stream) had the correct answer, while just 15 out of 50 boys (5 for scientific stream and 10 for literary stream) had the correct answer.

For the fifth sentence, students had to choose the correct answer for type two conditional sentences. 41 out of 100 students (41% of the students) chose the correct answer. 21 out of 50 girls got the answer correctly (16 for scientific stream and 5 for literary stream). However, 20 out of 50 boys got the answer correctly and they are divided into 12 out of 25 for the scientific and 8 for the literary stream.

According to the sixth sentence, conditional type three is needed for the correct answer. 53 out of 100 students (53% of the students) chose the correct answer. 23 out of 50 girls had the correct answer (16 for scientific stream and 7 for literary stream). Boys had 30 out of 50 correct answers (18 for scientific stream and 12 for literary stream).

For sentence number seven, students had to choose type one as a correct answer for the sentence. 59 out of 100 students (59% of the students) had the correct answer. From the 59 correct answers, there were 29 girls who had the correct answer divided into 19 out 25 girls from the scientific stream and 10 out of 25 from the

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literary stream. 30 out of 50 boys got the correct answer, 13 out of 25 boys were from the scientific stream and 17 out of 25 from the literary stream.

The correct answer for sentence number eight is also conditional type 1. 54 out of 100 students (54% of the students) had the correct answer. 24 out of 50 girls (16 for scientific stream and 8 for literary stream) had the correct answer, while 30 out of 50 boys (14 for scientific stream and 16 for literary stream) had the correct answer.

Concerning sentence number nine, conditional type three is required for the correct answer. There were 51 out of 100 students (51% of the students) who picked the correct conditional type out. The 51 students consist of 22 girls (18 for scientific stream and 4 for literary stream) and 29 boys (15 for scientific stream and 14 for literary stream).

For sentence number ten, the correct conditional type is two. The correct type answer was chosen by 54 out of 100 students (54% of the students). 29 out of 50 girls had the correct answer (19 for scientific stream and 10 for literary stream) and 25 out of 50 boys had the correct answer (19 for scientific stream and 6 for literary stream).

Concerning sentence number eleven, type two conditional is the correct type for the sentence. 57 of all the students (57% of the students) who did the test had the correct answer. From the 57 correct answers, there were 24 girls who had the correct answer divided into 16 out 25 girls from the scientific stream and 8 out of 25 from the literary stream. While, 33 out of 50 boys also got the correct answer, 20 out of 25 boys were from the scientific stream and 13 out of 25 from the literary stream.

Finally, sentence number twelve needs conditional type one to be correct. 73 out of 100 students (73% of the students) answered with type one. 31 out of 50 girls (16 for scientific stream and 8 for literary stream) had the correct answer. In contrast,

42 out of 50 boys (14 for scientific stream and 16 for literary stream) had the correct answer.

The following diagram shows the total correct answers for the recognition test for 100 students for each sentence:

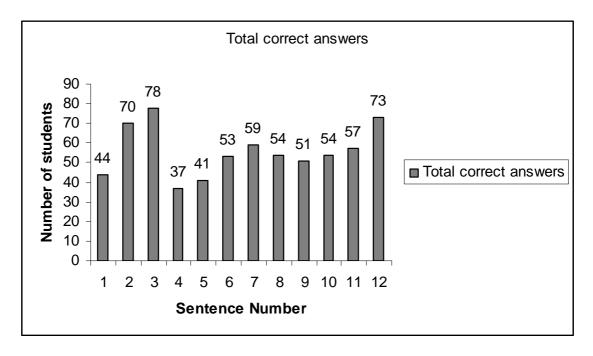


Diagram 2: the total correct answers for the recognition test

4.3 Production Results

For checking the production level of the students, twelve Arabic sentences were given to them to translate into English; each sentence represents a conditional type. Students had to translate the sentences using the correct conditional type for each one. The following table shows the results of the translation test for all the participants (100 Students: 50 boys and 50 girls) for both streams Literary and Scientific:

Nu Nu	S	irls (2 cientif strean	fic	L	irls (2 Jiterau Strean	·y	S	oys (2 cientif Strean	ic	L	oys (2 Jiterai Strean	·y	Total cor	C
<u>Sentence</u> <u>Number</u>	Correct Answer	Wrong type	Wrong sentence	Correct Answer	Wrong type	Wrong sentence	Correct Answer	Wrong type	Wrong sentence	Correct Answer	Wrong type	Wrong sentence	Total correct answers	Correct type
<u>1</u>	5	10	10	2	6	17	6	10	9	3	15	7	16	2
<u>2</u>	5	10	10	1	5	19	9	7	9	2	12	11	17	3
<u>3</u>	6	8	11	12	1	12	16	3	6	15	6	4	49	1
<u>4</u>	8	2	15	3	5	17	13	5	7	14	2	9	38	1
<u>5</u>	7	7	11	1	8	16	8	9	8	3	11	11	19	3
<u>6</u>	6	7	12	0	10	15	5	8	12	1	15	9	12	3
<u>7</u>	9	2	14	3	2	20	3	10	12	6	4	15	21	2
<u>8</u>	10	3	12	14	1	10	16	4	5	13	6	6	53	1
<u>9</u>	3	9	13	1	5	19	4	12	9	2	14	9	10	2
<u>10</u>	11	1	13	6	0	19	12	4	9	16	2	7	45	1
<u>11</u>	2	4	19	1	7	17	3	14	8	10	6	9	16	2
<u>12</u>	5	4	16	0	5	20	9	4	12	2	6	17	16	3

 Table 6: The results of the translation test

Sentence number one, type two conditional was required for the correct translation. 16 out of 100 students selected the correct type which is type two. The correct answer for girls was just 7 out of 50 (5 for scientific stream and 2 for literary stream), while boys had 9 correct answers (6 for scientific stream and 3 for literary stream).

Regarding the second sentence, conditional type three was needed for the correct answer, 17 out of 100 students translated the sentence by using the correct type. 6 out of 50 girls had the correct answer (5 for scientific stream and 1 for literary stream). Boys had 11 out of 50 correct answers (9 for scientific stream and 2 for literary stream).

Students had to choose type one to translate the third sentence in the correct way. 49 of all the students who did the test had the correct answer. From the 49 correct answers, there were just 18 girls who had the correct answer divided into 6 out 25 girls from the scientific stream and 12 out of 25 from the literary stream. In contrast, 31 out of 50 boys got the correct answer, 16 out of 25 boys were from the scientific stream and 15 out of 25 from the literary stream.

The correct type that students had to use in translation for sentence number four is also conditional type one. 38 out of 100 students had the correct answer. 11 out of 50 girls (8 for scientific stream and 3 for literary stream) had the correct answer, while 27 out of 50 boys (13 for scientific stream and 14 for literary stream) had the correct answer.

For the fifth sentence, students had to choose the conditional type three to translate the sentence in the correct way. 19 out of 100 students chose the correct answer. 8 out of 50 girls got the answer correctly (7 for scientific stream and 1 for

literary stream). However, 11 out of 50 boys got the answer correctly and they are divided into 8 out of 25 for the scientific and 3 for the literary stream.

For the sixth sentence, conditional type three was needed for the correct answer, 12 out of 100 students chose the correct answer. 6 out of 50 girls had the correct answer (6 for scientific stream and 0 for literary stream). Boys had also 6 out of 50 correct answers (5 for scientific stream and 1 for literary stream).

The correct conditional type for sentence number seven is conditional type two. 21 out of 100 students had the correct answer. From the 21 correct answers, there was 12 girls who had the correct answer divided into 9 out 25 girls from the scientific stream and 3 out of 25 from the literary stream. 9 out of 50 boys got the correct answer, 3 out of 25 boys were from the scientific stream and 6 out of 25 from the literary stream.

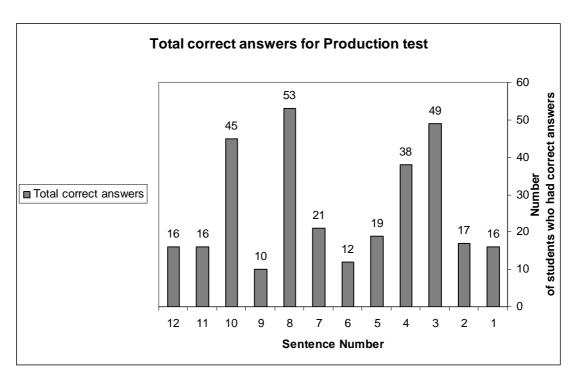
Regarding sentence number eight, students had to choose type one as a correct conditional type for the sentence. 53 out of 100 students had the correct answer. 24 out of 50 girls just had the correct answer (10 for scientific stream and 14 for literary stream), while 29 out of 50 boys (16 for scientific stream and 13 for literary stream) had the correct answer.

Concerning sentence number nine, conditional type two was needed for the correct answer. There were just 10 out of 100 students picked the correct conditional type out. The 10 students consist from 4 girls (3 for scientific stream and 1 for literary stream) and 6 boys (4 for scientific stream and 2 for literary stream).

For sentence number ten, the correct conditional type is one. The correct type was chosen by 45 out of 100 students. 17 out of 50 girls had the correct answer (11 for scientific stream and 6 for literary stream) and 28 out of 50 boys had the correct answer (12 for scientific stream and 16 for literary stream).

Regarding to the eleventh sentence, conditional type two is the correct type for translation the sentence. 16 of all the students who did the test had the correct answer. From the 16 correct answers, there were just 3 girls who had the correct answer (2 for scientific stream and 1 for literary stream). While, 13 out of 50 boys got the correct answer, 3 out of 25 boys were just from the scientific stream and 10 out of 25 from the literary stream.

Finally, sentence number twelve needs conditional type three to be correct. 16 out of 100 students translated using type one. 5 out of 50 girls (5 for scientific stream and 0 for literary stream) had the correct answer. In contrast, 11 out of 50 boys (9 for scientific stream and 2 for literary stream) had the correct answer.



The following diagram shows the total correct answers for the production test:

Diagram 3: The total correct answers for the production test

The highest four translated sentences correctly were sentence number three, four, eight and ten (sentence three had 49 correct answers out of 100 answers, sentence four had 38 correct answers out of 100 answers, sentence eight had 53 correct answers out of 100 answers and sentence ten had 45 correct answers out of 100 answers). These four sentences are all type one conditional sentences, while the other two types had less correct answers as diagram 3 shows that clearly.

4.4 Summary

Chapter four introduced the results of the study from three dimensions in light of numerical results. The first one is the questionnaire. It came in two parts. One dealt with the age, the gender and the stream of the participants. 65 out of 100 of the participants were 17 years old and 35 out of 100 were 18 years old. 50 were males and also 50 were females. 25 out of 100 were scientific females, 25 out of 100 were scientific males, 25 out of 100 were literary females, and 25 out of 100 were literary males. The other part of the questionnaire asked the 100 participants five Yes/No questions and 86 of the participants agreed that it is important to use conditional sentences in conversation in English. 74 of the participants agreed that they had the ability of using conditional sentences in conversation in English, 82 of the participants agreed that the teacher's explanation helps them to understand the conditionals better, 57 of the participants agreed that textbook helps them to understand the conditionals better, and 60 of the participants said that they gave time when studying the conditionals. The results of the production test were as the following: The first three most correct answers were sentence three which is type 1 conditional and which got 78 out of 100, sentence two which is type 2 conditional and which got 70 out of 100 and sentence seven which is also type 1 conditional. However, the least three correct answers were sentence one which got 44 out of 100 correct answers and it is type 2 conditional, sentence five which got 41 out of 100 correct answers and it is also type 2 conditional, and the least one is sentence number four which got 37 out of 100 correct answers and it is also type 2 conditional sentence. In the production test, students were given twelve Arabic sentences to answer. And the highest three results for sentence eight which got 53 correct answers out of 100 and it is conditional type one, sentence three which got 49 correct answers out of 100 and it is also conditional type one, and sentence ten which got 45 correct answers out of 100 and it also is conditional type one. In contrast, the least three correct answers were sentence one and eleven which got 16 correct answers out of 100 and it is conditional type two and in the same result was for sentence number twelve but it is conditional type 3, then sentence number six which got 12 correct answers out of 100 and it is conditional type three and the least sentence was sentence number nine which got 10 correct answers out of 100 and it is about conditional type two.

Chapter Five: Discussion and Analysis of the Results

This chapter deals with two main issues. The first part discusses and analyzes the six research questions of the study. And the second part discusses and analyzes the results of the production test.

5.1 Research Questions Discussion and Analysis

In this paper, the researcher tried to answer six research questions.

5.1.1 How well have the second secondary students in Bethlehem governmental schools acquired the conditional sentences at the recognition level?

To answer this question, students had twelve multiple choice sentences. The average of correct answers in recognition level is 55.91% of all students. This level tests the form of the three types of conditional sentences. In his research on university students Fareh (2005) had a near percentage with 56.3% of overall recognition correct responses.

5.1.2 What kind of difficulties do they encounter in recognizing the conditional sentences?

The following table shows the percentages of correct answers and percentages of wrong answers for the three types for the previous question in the recognition level:

Types	Percentage of correct answers	Percentage of wrong answers
One	66%	34%
Two	49.2%	50.8%
Three	53.6%	46.4%

Table 7: The percentage of the correct and the wrong answers of the three types for the recognition test.

Students face difficulty mostly in recognizing type two-form with a percentage of 49.2%. Then 53.6% of students recognized type three, which means that 46.4% didn't recognize type three. However, 66% of students had type one correctly with just 34%

of wrong answers of type one. Diagram four shows the percentage of correct answers for the recognition test for the three types:

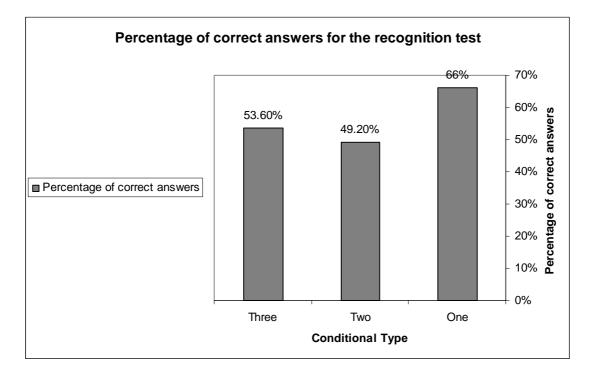


Diagram 4: Percentage of correct answers for the recognition test for the three types.

The least correct answer was for sentence number four (37%) "If I had wings, I **would fly** high in the sky" for type two. However, the most correct answer was for sentence number three "If we go to Jordan, we **will see** Petra" which had 78% of participants' correctness for type one.

5.1.3 How well have the second secondary students in Bethlehem governmental schools acquired the conditional at the production level?

For production level, the student had twelve Arabic sentences which consist of the three types of conditional sentences. The average of the correct answers in the translation test is 26%. This result is close to the result of Fareh (2005) in the production level which was 32.2%.

5.1.4 What kind of difficulties do they encounter in producing the conditional sentences?

The following table shows the percentages of the correct answer for three types in translation level.

Types	Percentage of correct answer	Percentage of wrong answer
One	46.25 %	53.75%
Two	15.75 %	84.25%
Three	16 %	84%

Table 8: The percentage of the correct and the wrong answers of the three types for the production test.

Only 15.75% of students had correct answers in producing type two conditional sentences and 16% of them had correct answers in producing type three conditional sentences. However, 46.25% of students had correct answers in producing type one conditional sentences. Diagram 5 shows the percentage of the correct answers for the production test for 100 students:

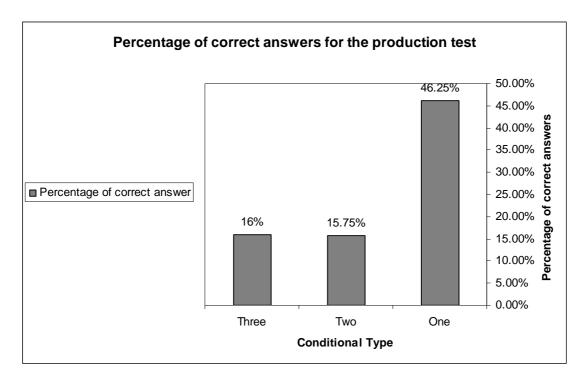


Diagram 5: Percentage of correct answers for the production level

This shows that in both levels (recognition and production) students face a real problem in type two and three conditional sentences. Moreover, they face less difficulty in recognizing and producing type one conditional sentences. The following table shows the comparative percentages of recognition level and production level of the conditional types for all the participants:

Types	Recognition percentage of correct	Production percentage of correct
Types	answer	answer
One	66%	46.25 %
Two	49.2%	15.75 %
Three	53.6%	16 %

Table 9: The percentage of the correct answers of the three types for the recognition and production level.

Diagram six shows the distinction between the recognition test and the production test in a clear way; the grey column represents the percentages of the correct answers of the recognition and the black column represents the percentage of the correct answers of the production test for 100 students:

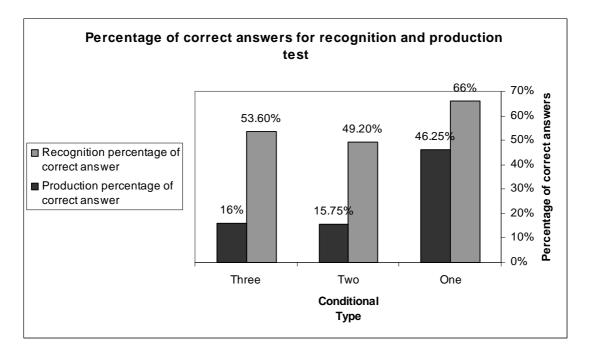


Diagram 6: percentage of the correct answers for the recognition and production test

The difference between production and recognition is clear in diagram six and this was represented by Noam Chomsky when he described the difference between competence and performance. According to Chomsky language competence is "the knowledge that the native speakers have of their language" and this is similar to recognition which talks about the knowledge the students got about the form and the rules of the conditional sentences. Moreover, Chomsky described language performance as "the actual behaviour" and this is similar to the actual production of the students in this study. (Widdowson, 2003)

Therefore, there is a big gap between competence and performance of the students or in another way it is a gap between recognition and production of the students.

5.1.5 Does the gender variable influence the students' performance in recognizing and producing conditional sentences?

Item	Gender	No.	mean	Std.	D.F	t	Sig.
Recognition	Male	50	7.66	3.21	98	0.716	0.476
	Female	50	7.18	3.49		01710	
Production	Male	50	4.79	3.33	87	3.014	0.003
Troduction	Female	50	2.73	3.11		5.011	0.005
Total	Male	50	11.88	6.25	98	1.838	0.069
degree	Female	50	9.64	5.93		1.500	

To answer the question about the gender variable look at this table:

Table 10: recognition and production test due to gender variable

According to table 10, the results of the T-test show that there are significant differences between males and females in recognition. The mean result for males is 7.66 and the standard deviation is 3.21, and for females the mean is 7.18 and the standard deviation is 3.49. However, the results of the T-test for the production test

show that there are significant differences between them. The mean result for males is 4.79 and the standard deviation is 3.33, and for females the mean is 2.73 and the standard deviation is 3.11. The mean total degree for males is 11.88 and the standard deviation total degree for males is 6.25, while for females the mean total degree is 9.64 and the standard deviation total degree for females is 5.93. So, males are better than females, and this result shows that the hypothesis is not accepted.

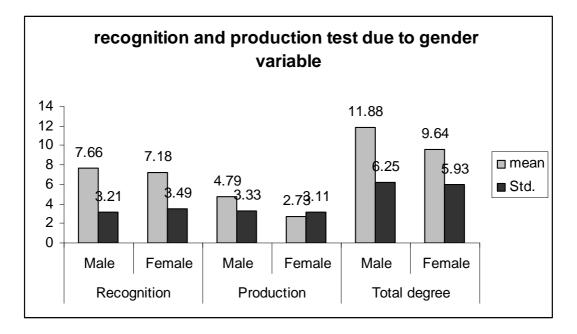


Diagram 7: recognition and production test due to gender variable

Diagram 7 shows that males surpass females in both the recognition and production test. However, both males and females are close in the recognition test.

5.1.6 Does the streams variable influence the students' performance in recognizing and producing conditional sentences?

To answer the question about the stream variable look at this table:

Item	Stream	No.	Mean	Std.	D.F	t	Sig.
Decomition	Scientific	50	8.62	2.67	08	2 925	0.000
Recognition	Literary	50	6.22	3.54	98	3.825	0.000
Production	Scientific	50	4.69	3.82	87	2.508	0.014

	Literary	50	2.91	2.68			
Total	Scientific	50	12.56	6.08			
	T •	~~	0.07		98	3.038	0.003
degree	Literary	50	8.96	5.76			

Table 11: recognition and production test due to the stream variable

The result of the t-test shows that there are significant differences between students in the recognition and production according to stream. According to table 11, the mean result for scientific stream is 8.62 and the standard deviation is 2.67, and for literary stream the mean is 6.22 and the standard deviation is 3.54. However, the results of the T-test for production test show that there are significant differences between them. The mean result for scientific stream is 4.69 and the standard deviation is 3.82, and for literary stream the mean is 2.91 and the standard deviation is 2.68.

The mean total degree for scientific stream students is 12.56 and the standard deviation total degree is 6.08, while for the literary stream students the mean total degree is 8.96 and the standard deviation total degree is 5.76. So the hypothesis was accepted because the scientific stream is better than the literary stream in recognizing and producing conditional sentences, it is shown in diagram 8.

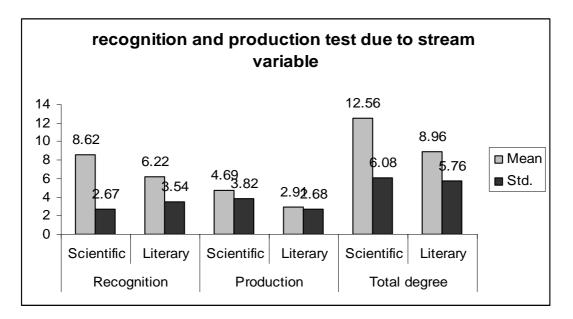


Diagram 8: recognition and production test due to stream variable

Item	Gender	Stream	Mean	Std.
	Male	Scientific	8.32	3.14
Recognition		Literary	7.00	3.20
	Female	Scientific	8.92	2.11
		Literary	5.44	3.75
	Male	Scientific	5.57	3.59
Production		Literary	4.46	3.20
	Female	Scientific	3.80	3.91
		Literary	1.78	1.79

Table 12: recognition and production test for males and females due to stream variable

Table number 12 shows that there are significant differences between males and females in the recognition and production according to stream. Females from the scientific stream got better results than males from the scientific stream in the recognition test. The mean result for females from scientific stream is 8.92 and the standard deviation is 2.11 were the mean result for males from the scientific stream is 8.32 and the standard deviation is 3.14. In contrast, males from the scientific stream got better results than females from scientific stream in production test. The mean result for males from scientific stream is 5.57 and the standard deviation is 3.59 were the mean result for females from the scientific stream is 3.80 and the standard deviation is 3.91. Also, table 10 shows that males from literary stream got better result than females from literary stream in both tests (recognition and production). Moreover, table 10 shows that females from scientific stream got the best result in recognition test and males from scientific stream got the best result in production test.

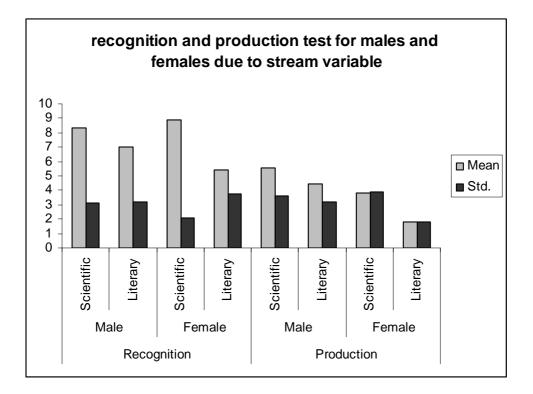


Diagram 9: recognition and production test for males and females due to stream variable

5.1.7 Does the age variable influence the students' performance in recognizing and

producing conditional sentences?

To answer the question about age variable look at this table:

Item	Age	No.	mean	Std.	D.F	t	Sig.
Recognition	17	65	7.49	3.29	98	0.293	0.770
	18	35	7.28	3.49	70	0.275	0.770
Production	17	57	3.70	3.39	70	0.100	0.850
Production	18	33	3.84	3.38	78	0.190	0.850
Total	17	65	10.73	6.12	98	0.047	0.962
degree	18	35	10.80	6.33	20	0.047	0.902

Table 13: recognition and production test due to age variable

The result of the T-test shows that there are no significant differences between boys and girls in recognition and production due to age. According to table 11, the mean result for 17-year students is 7.49 and the standard deviation is 3.29, and for 18year students the mean is 7.28 and the standard deviation is 3.49. However, the results of the T-test for the production test show that there are significant differences between 17-year and 18-year students. The mean result for 17-year students is 3.70 and the standard deviation is 3.39, and for 17-year students the mean is 3.84 and the standard deviation is 3.38.

The mean total degree for the 17-year students is 10.73 and the standard deviation total degree is 6.12, while for the 18-year students the mean total degree is 10.80 and the standard deviation total degree is 6.33. Therefore the hypothesis was accepted because the 17-year students and 18-year students got almost the same results in recognizing and producing conditional sentences.

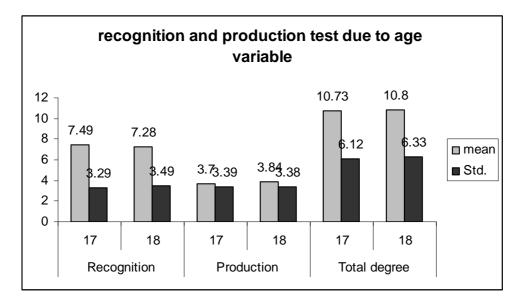


Diagram 10: recognition and production test due to age variable

Diagram 10 shows the close results of the recognition and production test due to the age variable with no significant difference between the ages.

5.2 Production Results Discussion and Analysis

This section deals with analyzing each sentence which was given in the translation test.

For the first sentence, students had to translate the Arabic sentence " نفي المسجد الأقصى دائما I lived in Jerusalem, I would always pray in Al-Aqsa mosque. Students had to use type two conditional sentence. Only 16 out of 100 got this sentence correctly and 42 out of 100 students used other types in translating it and the same for irrelevant translation or wrong sentence translation. 41 out of 42 who used other types of conditionals used type one were just one student used type three to translate the sentence.

Sentence: One	Type 1	Type 2	Туре 3	Wrong sentence
100 students	41	16	1	42

In checking the wrong sentences, the researcher found that four students used a present form in the if-clause and past form in the main clause while translating sentence number one, for example, **If I live in Jerusalem, I would pray in Al-Aqsa mosque*. Three students used past in the if-clause and future in the main clause. For example, **If I lived in Jerusalem, I will pray in Al-Aqsa mosque*. Moreover, Two students inserted verb to be after the model in the main clause, for example, **If I live in the Jerusalem, I will be pray in Al-Aqsa mosque always*.

The next sentence is sentence number two. Student had to translate the Arabic sentence "لو أن أحمد حضر الدرس لفهم كل شيء" into English to be as *If Ahmad had attended the lesson, he would have understood everything* to form a type three conditional sentence. 45% of students had irrelevant sentences while 20% of them had the correct type. 18% of the students translate it to type two and 17% to type one the following table shows that:

Sentence: Two	Type 1	Type 2	Type 3	Wrong sentence
100 students	20	18	17	45

Five students used wrong forms of the conditional sentence. They used past in the if-clause and future in the main clause, for example: **If Ahmad attended to the lesson, he will understand everything.* There are three students who answered with the past in the if-clause and present in the main clause, for example: **If Ahmad had the lesson, he understands everything.*

For the third sentence, students had to translate the Arabic sentence " بعض النقود سوف أرسل إلى أهلي غدا into English, and the suitable translation for it is: *If I have some money, I will send to my family tomorrow*. Students had to use type one conditional sentences. 49 out of 100 got this sentence correctly and just 17 out of 100 used other types in translating it, while 34 out of 100 had irrelevant translation. 15 out of 17 who used other types of conditionals used type two were two students used type three to translate the sentence.

Sentence: Three	Type 1	Type 2	Туре 3	Wrong sentence
100 students	49	15	2	34

The main wrong answer that came under irrelevant answers is: using the past in the if-clause and the future in the main clause Like: **If I had some money, I will send to my family tomorrow* and **If I got some money, I will send to my family tomorrow.* 17 out of 42 students had this problem. 9 out of 42 students used the present form in the if-clause and they used past in the main clause and their answer was like: **If I have some money, I would send to my family tomorrow.* Regarding sentence number four, students had to use type one to translate the Arabic sentence "إذا لم أكل أجوع بشدة" into English to be as: *If I don't eat, I will be hungry*. 38% of the students translate of the sentence correctly, while 5% of the students used type two and 4% of students used type three. The highest percentage is for irrelevant answers which is 53%.

Sentence: Four	Type 1	Type 2	Type 3	Wrong sentence
100 students	38	5	4	53

Eleven students used the past in the if-clause and future in the main clause, so their answers are as: **If I didn't eat, I will be hungry. *If I don't eat, I would be hungry* this was the answer for 3 students. There were 3 students used present simple in the if-clause and in the main clause, for example: *If I don't eat, I feel hungry*.

The next sentence is sentence number five. Student had to translate the Arabic sentence "الو أني رأيت ما حدث لبعت السيارة" into English to be as: *If I had seen what happened, I would have bought the car* to form a type three conditional sentence. 45 of students had irrelevant sentences while 19% of students had the correct type. 19% of the students translate it to type two and 17% to type one.

Sentence: Five	Type 1	Type 2	Type 3	Wrong sentence
100 students	17	19	19	45

20 students translated the sentence using type two to be as: *If I saw what happened, I would buy the car.* They couldn't distinguish between produce type two and type three. There were 4 students who translated the sentence as : *If I saw what happened, I would have bought the car* and there were 5 students who translated it as : **If I see what happened, I would buy the car.*

Sentence number six which is "لو أنك عرفت الإجابة لما رسبت" required type three "لو أنك عرفت الإجابة لما رسبت" to translate correctly as: If you had known the answer, you wouldn't have failed. Only

12 out of 100 got this sentence correctly and 41 out of 100 used other types in translating it, while 47 out of 100 had irrelevant translation. 21 out of 41 who used other types of conditionals used type one and 20 students used type two to translate the sentence.

Sentence: Six	Type 1	Type 2	Type 3	Wrong sentence
100 students	21	20	12	47

One of the students' answers that drew the researcher's attention is: **If you knew the answer, you didn't fail.* There were 5 students who used this form. There were 3 students who used the past in the if-clause and the future in the main clause to be their answer like: **If you knew the answer, you will not fail* and there were 3 students answering with: **If you knew the answer, you will didn't fail.*

For the seventh sentence, students had to translate the Arabic sentence " عصفوراً لذهبت إلى الصين into English, and the suitable translation for it is: *If I were a bird, I would go to the China.* Students had to use type two conditional sentences. 21% got this sentence correctly and 20% used other types in translating it, while the highest percentage was for irrelevant answers which are 59%. 13 out of 20 who used other types of conditionals used type one and 7 students used type three to translate the sentence.

Sentence: Seven	Type 1	Type 2	Type 3	Wrong sentence
100 students	13	21	7	59

11 students translated the sentence using the past in the if-clause and the future in the main clause, for example: **If I were A bird, I will go to China* and there were 6 students who used a present form in the if-clause and the past form in the main clause, for example: **If I'm a bird, I would go to China*. Concerning sentence number eight, type one is the correct conditional type to use in translating the sentence "اذا كان لدي الوقت سأزورك". So, the correct answer has to be: *If I have a time, I will visit you.* This sentence got the highest correct answers among all the correct answers for 12 sentences; it got 53 correct student answers out of 100 answers. This means that 14 out of 100 students had a wrong answer, 13 out of whom translated it using type two and just one student used type three and 33 students had irrelevant answers.

Sentence: Eight	Type 1	Type 2	Type 3	Wrong sentence
100 students	53	13	1	33

**If I had time, I will visit you;* this was the answer for 5 students who used the past in the if-clause and the future in the main clause. Also, there were 5 students who used a present form in the if-clause and the past form in the main clause, for example: If I have time, I would visit you.

The correct answer for sentence number nine is conditional type two. The Arabic sentence is "لو سكنت في أمريكا سأتكلم الانجليزية" and the suitable translation for it is: *If I lived in America, I would speak English.* Only 10 of students got the correct type to translate the sentence in the correct way where 37 out of 100 students used type one to translate the sentence and 5 used type three. However, 48 of the students had irrelevant answers or wrong sentences.

Sentence: Nine	Type 1	Type 2	Type 3	Wrong sentence
100 students	37	10	5	48

There were seven students who used the past in the if-clause and future in the main clause, for example: **If I lived in America, I will speak English* and there were 5 students who answered with: **If I had lived in America, I would speak English*.

For the tenth sentence, students had to translate the Arabic sentence " الباب مفتوحاً ستدخل القطة into English, and the correct translation has to be: *If I leave the door opened, the cat will enter*. Students had to use type one conditional sentence. 45 out of 100 got this sentence correctly and just 7 out of 100 used other types in translating it, while 48 out of 100 had irrelevant translation. 5 out of 7 who used other types of conditionals used type two and just two students used type three to translate the sentence.

Sentence: Ten	Type 1	Type 2	Type 3	Wrong sentence
100 students	45	5	2	48

There were 9 students who used the past in the if-clause and the future in the main clause, for example: **If I left the door opened, the cat will enter*. Also, there were 9 students who used present the simple in if-clause and in the main clause, for example: **If I leave the door opened, the cat enter*.

Sentence number eleven "لو سافرت إلى مصر لرأيت النيل" needs type two to translate as: *If I traveled to Egypt, I would see the Nile River*. Only 16% of the students got this sentence correctly and 53% of the students had irrelevant translation. However, 19% of the students used conditional type one and 12% of the students used type three to translate the sentence.

If I traveled to Egypt, I will see the Nile River* was the answer for 7 students who used the past form in if-clause where they used the future in the main clause. However, four students used the past simple form in both the if-clause and the main clause to give answers like:If I traveled to Egypt, I saw the Nile river* and there were 3 students who answered with: **If I had traveled to Egypt, I would see the Nile river*.

Sentence: Eleven	Type 1	Type 2	Type 3	Wrong sentence
100 students	19	16	12	53

Finally, is sentence number twelve, students had to translate the Arabic sentence "لو أنها رأت الإشارة لما عملت حادث" into English as *If she had seen the sign, she wouldn't have made an accident* to form a type three conditional sentence. 65% of the students had irrelevant sentences which is the highest percentage of irrelevant answers among all 12 sentences. While, 16% of students had the correct type, 17% of the students translated it as type two and just 2% as type one. The following table shows that:

Sentence: Twelve	Type 1	Type 2	Туре 3	Wrong sentence
100 students	2	17	16	65

There were 6 students who used the past simple in both the if-clause and the main clause to give answers like: **If she saw the sign, she didn't make an accident*. Also, there were 6 students answering with: ** If she had seen the sign, she wouldn't make an accident*. Moreover, there were two students who answered with: **If she had saw the sign, she would not made an accident*.

The most common mistakes that drew the researcher's attention were:

- a. using a present form in the if-clause and the past form in the main clause, for example:
- If you know the answer, you wouldn't fail.
- If I'm a bird, I would go to China.
- If I have time, I would visit you.
- If I live in America, I would have talked English.
- b. using the past tense in the if clause and future in the main clause, for example:
- If Ahmad attended to the lesson, he will understand everything,
- If I had have some money, I will send to my family.
- If I got some money, I will send to my family.
- If I had some money, I will send to my family.

- If I earned some money, I will send to my family.
- If I didn't eat, I will feel hungry.
- If I saw what happened, I will buy the car.
- If you knew the answer, you will not fail.
- If I were a bird, I will go to China.
- If I had time, I will visit you.
- If I lived in America, I will speak English.
- If I left the door opened, the cat will enter.
- If I traveled to Egypt, I will see the Nile river.

5.3 Summary

This study aimed to answer six research questions. The average of the correct answers in recognition was 55.91 %. Students had difficulty in recognizing type two with a percentage of 49.2% correct answers. 26% is the average that students got at the production level. Students face difficulty when producing type two with an average 15.75% and it was almost the same for type three with an average 16%. Males did better than females in recognizing and producing conditional sentences. The scientific stream did better in recognizing and producing conditional sentences. The age variable didn't influence the students' performance in recognizing and producing conditional sentences. Students had two major mistakes that were repeated by many students. They used the present form in the if-clause and the past form in the main clause, and they used the past tense in the if-clause and future in the main clause. To conclude, students were better in recognition than production which may be because students' books and teachers focus on the form rather than the meaning in the conditionals.

Chapter Six: Conclusion and Recommendations

6.1 Conclusion

The purpose of the study is to investigate the problems that encounter 12th grade students in Bethlehem governmental schools in recognizing and producing conditional sentences.

In order to reveal some facts about recognizing and producing conditional sentences, some procedures were made by the researcher: students had a questionnaire to show their opinion about the conditionals, and a multiple-choice achievement test that tests the form of the conditionals. Besides, a translating test which tests the meaning of the conditionals was given.

The results of the questionnaire and the tests showed a big gap between what students think and what they really got. Moreover, the results of the recognition test and production test showed a big gap between the form and the meaning. The average of recognition for all students was 56% while the average of production test was lower 24%. The three conditional types were tested; regarding type one, in the recognition test, students got 66% versus 41% in production with a highest percentage of all types. For type two, in recognition, students got 49.2% versus 15% in production. With respect to type three, in recognition test, students got 53.6% versus 16% in production.

When comparing girls and boys, in both recognition and production, boys got higher percentages. The recognition percentage for boys was 60.16% versus 51.65% for girls. Regarding production, the percentage for boys was 31.83% versus 16.16% for girls. Regarding the stream, the scientific stream had higher percentage than the literary in both the recognition and production. In recognition, the scientific students got 66.65% versus 45.17% for the literary students. In production, the scientific students got 29% versus 19% for the literary students.

While students were translating Arabic conditional sentences into English conditional sentences, they had two major grammatical mistakes which are: using a present form in the if-clause and the past tense in the main clause, and using the past tense in the if-clause and the future in the main clause.

6.2 Recommendations

In light of the findings and the conclusions, the researcher recommends the following points:

- A similar research should be conducted on the same topic in other regions in Palestine.
- Due to the results of the questionnaire about the textbook, the Ministry of Education in Palestine should make adjustments on the tasks of the textbook on the conditional topics to meet the needs of the students.
- 3. Because of the big gap between recognition and production, textbooks and teachers should focus on translation, as a sound and effective teaching technique when introducing conditional sentences in the classroom.
- 4. Due to the results of the translation test, teachers should use techniques that encourage students to use and write conditionals in their speech and writings.

References

A preliminary list of references

- Azar, B, S. (2002). Understanding and Using English Grammar. 3rd ed. New York. USA. p.p. 367 – 371 & p. 413.

- Beare, K. (2013). Conditional Forms. Downloaded: June, 22, 2013. Retrieved from:

http://esl.about.com/od/gramma1/a/conditional.htm

- Celce -Murcia, M & D. Larsen- Freeman. (1999). The Grammar book (2nd ed.) Boston: Heinle.

- Covitt, R.I. (1976). Some problematic grammar areas for ESL teachres. Unpublished master's thesis, UCLA.

- Cowan, R. (2008). The Teacher's Grammar of English A course book and reference guide. Cambridge University Press. New York. USA. p. 449

- Dancygier, B. (2004). Conditionals and Prediction, Time Knowledge and causation in conditional constructions, Cambridge University press. Cambridge.UK. p.1.

- Declerck, R. Reed, S. (2001) Topics in English linguistics Conditionals. A Comprehensive Empirical Analysis. Berlin. Germany. p.8

- Fareh, S. (2005). The Acquisition of conditional sentences by Arab learners of English. Studies in contrastive linguistics. Proceeding of the 4th International Contrastive Conference, p.p. 253-263.

- Figueroa, C. & Garate, T. (2006). Studies in Contrastive Linguistics University of Santiago de Compostela. Spain, p.p.253-263 - Funk, W.P. (1985). A semantic Typology of conditional sentences. Folia linguistic. Vo.19, Issue 314, p.p.365-413.

- Gordon, D. (1985). The Marking of conditionality in one learner's interlanguage: A semantic analysis. Working papers, Department of English as a second language, University of Hawaii, Manoa 4 (1), p.p.77-102.

- Gramley, S. & Patzold, K. (2004). A Survey of Modern English. 2nd ed, p.p. 126-127.

- Haegeman, L. (1984). Pragmatic Conditionals in English. Vo.18, Issue112, p.p.485-502.

- Hornero, A., Luzon, M. & Murillo, S. (2008) Linguistic Insights. Studies in Language and Communication. p.p. 215-216.

- Johnson, B. & Christensen, L. (2012). Educational Research Quantitative, Qualitative, and Mixed Approaches. 4th ed., United States of America. p.40

- Kharma, N. and Hajjaj, A. (1997) Errors Among Arabic Speakers: Analaysis and Remedy. Beirut: Libraire du Liban, p.p.137-140.

-Leech, G. (2004). Meaning and the English Verb. 3rd ed. Great Britain. p.p. 119-125.

- Mindt, D. (1996). English Corpus Linguistics and the foreign Language teaching Syllabus. In J. Thomas of M. Short (Eds.), Using Corpora for Language Research. London: Longman.

- Murphy, R. (1994). English Grammar in Use. A Reference and Practice Book for Intermediate Students. 2nd ed. Cambridge University Press. p.p. 76 – 80.

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 Nayef, K. & A.Hajjaj. (1997) Errors in English among Arabic speakers:
 Analysis and remedy. Beirut, Lebanon: York press and Librainie dn Liban. p.p. 129-142.

 Narayanan, R. Liu, B. & Choudhary, A. (2009). Sentiment Analysis of Conditional sentences. EMNLP '09 Proceedings of the 2009 conference on Empirical Methods in Natural Language processing. Vo.1, Vo.1. USA. p.p. 180-189.

- Norris, R.W. (2003). How Do We Overcome the Difficulties of Teaching Conditionals? Bullentin of Funkuoka International University, No.9: p.p. 39-50.

- Nunan, D. (1992). Research Methods in Language Learning. Cambridge University press. p.p. 231-232

- Odlin, T. (1994). Perspectives on Pedagogical Grammar. The Ohio State University. Cambridge University press. p. 6.

-Schwenter, A (1998). The pragmatics of conditional marking: Implicature, Scalarity, and exclusivity. (Doctoral dissertation, Stanford University, 1998).

- Widdowson, H. G. (2003) Linguistics. Oxford University press. p. 24.

-Yale, George (2004). Explaining English Grammar, Oxford University Press. p.54, p.97, p.p. 128-129

List of Appendices

Appendix 1: Questionnaire

Part one

Please put X in the parentheses

1- Age:	17 years ()	18 years () Above 18 years ()
2- Gender:	male ()	female ()
3- Stream:	literary ()	scientific ()

Part two

Please answer the questions below:

هل تعتقد ان استخدام الشرط في اللغة الانجليزية مهم في المحادثة؟

- د. هل تشعر انك تستطيع استخدام الجمل الشرطية في المحادثة?
- هل تشعر ان شرح المعلم يساعدك على فهم الجمل الشرطية بطريقة افضل؟
 - هل تشعر أن الكتاب يساعدك على فهم الجمل الشرطية بطريقة افضل؟
 - 5. هل تشعر انك تعطي وقتا كافيا عند در اسة الجمل الشرطية?

Appendix 2: Achievement Conditional Tests

A. Recognition

Choose (a, b, c or d) to complete each of the following conditional sentences:

1. If you woke up early, you the bus.

a. don't miss b. won't miss c. wouldn't miss d. wouldn't have missed

2. If I his address, I would have sent him an invitation.

b. will find a. find c. had found d. would have sent 3. If we go to Jordan, wePetra. b. will see a. see c. would see d. would have seen 4. If I had wings, I high in the sky a. flew b. will fly c. would fly d. would have flown 5. If I had money, I a car b. will buy c. would buy d. would have bought a. bought 6. If Ahmad had had the money, he a BM. b. will buy a. buys c. would buy d. would have bought 7. If my father meets your father, he him what you did. a. tells b. will tell c. would tell d. would have told 8. If she needs to call her friend, her brother...... her his phone. a. gives b. will give c. would give d. would have given 9. If you had driven more carefully, you an accident. a. don't have b. won't have c. wouldn't have d. wouldn't have had 10. He happy if he accepted my advice. b. will be c. would be d. would have been a. was

11. If we had played a little better, we the match.

a. win b. will win c. could win d. could have won 12. If I hard, I will pass the test. a. study b. will study c. would pass d. would have passed **B)** Translation Translate the following conditional sentences into English: لو أنى اسكن فى القدس لصليت فى المسجد الأقصى دائما. لو أن احمد حضر الدرس لفهم كل شيء. . لو توفر لدّى بعض النقود سوف ارسل إلى اهلى غدا. .4 اذا لم اكل اجوع بشدة. .5 لو أنى رأيت ما حدث لبعت السيارة. 6. لو انك عرفت الاجابة لما رسبت. لو كنت عصفورا لذهبت الى الصين. 8. اذا كان لدى الوقت سأزورك. 9. لو سكنت في امريكا سأتكلم الانجليزية.

10. اذا تركت الباب مفتوحا ستدخل القطة.

11. لو سافرت الي مصر لرأيتُ النيل.

12. لو انها رأت الاشارة لما عملت حادث.

Appendix 3: Data Tables

1. Age

Valid Percent	Frequency	
65.0	65	17
35.0	35	18
100.0	100	Total

2. Gender

Valid Percent	Frequency	
50.0	50	male
50.0	50	female
100.0	100	Total

3. Stream

Valid Percent	Frequency	
50.0	50	literary
50.0	50	scientific
100.0	100	Total

4. Questionnaire sentence one

Valid Percent	Frequency	
14.0	14	No
86.0	86	Yes
100.0	100	Total

5. Questionnaire sentence two

Valid Percent	Frequency	
26.0	26	No
74.0	74	Yes
100.0	100	Total

6. Questionnaire sentence three

Valid Percent	Frequency	
18.0	18	No
82.0	82	Yes
100.0	100	Total

7. Questionnaire sentence four

Valid Percent	Frequency	
43.0	43	No
57.0	57	Yes
100.0	100	Total

8. Questionnaire sentence five

Valid Percent	Frequency	
40.0	40	No
60.0	60	Yes
100.0	100	Total

9. T-test

Group Statistics

	age	N	Mean	Std. Deviation
recognition	17	65	7.4923	3.29831
	18	35	7.2857	3.47742
production	17	57	3.7018	3.39098
	18	32	3.8438	3.38983
total degree	17	65	10.7385	6.12188
	18	35	10.8000	6.33756

10. Means and Standard deviations

Std. Deviation 3.13777 3.54330 6.62327 18 Mean 7.5000 5.4286 12.2500 Std. Deviation 3.20713 3.99404 7.0602 Total Mean 8.3200 5.5714 13.0002 literary 17 Mean 7.4000 4.4615 11.2667 Std. Deviation 3.74759 2.75681 6.0000 3.6000 10.0000 Std. Deviation 3.20156 2.98349 5.75384 Total Mean 7.0000 4.0870 10.7600 Std. Deviation 3.20156 2.98349 5.75384 Total Mean 6.8893 4.3529 11.0000 Std. Deviation 3.20166 2.98349 5.57846 Total Mean 6.8893 4.3529 11.0000 Std. Deviation 3.21101 3.33815 11.1820 Std. Deviation 3.21101 3.33815 11.1820 Std. Deviation 2.21660 4.07462 5.54827				Repor			
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Total Mean 7.6600 4.7955 11.8800 female scientific 17 Mean 8.7500 3.5385 11.6250 female scientific 17 Mean 8.7500 3.5385 11.6250 Std. Deviation 2.01660 4.07462 5.54827 18 Mean 9.2222 4.2500 13.0000 Std. Deviation 2.38630 3.8955 12.1200 Std. Deviation 2.11975 3.91943 5.57765 literary 17 Mean 5.1765 1.6471 6.8235 Std. Deviation 3.72886 1.27187 4.87641 18 Mean 6.0000 2.1429 7.8750 Std. Deviation 3.75366 1.79320 5.28110 Total Mean 5.4400 1.7917 7.1600 Std. Deviation 3.48536 2.94470 5.67956 18 Mean 7.7059 3.2667 10.582 Std. Deviation 3.64903 3.47371			18	Mean	6.8889	4.3529	11.0000
Std. Deviation 3.21101 3.33815 6.25199 female scientific 17 Mean 8.7500 3.5385 11.6250 Std. Deviation 2.01660 4.07462 5.54827 18 Mean 9.2222 4.2500 13.0000 Std. Deviation 2.38630 3.895 12.1200 Std. Deviation 2.11975 3.91943 5.5763 literary 17 Mean 8.9200 3.8095 12.1200 Std. Deviation 2.11975 3.91943 5.5763 literary 17 Mean 5.1765 1.6471 6.8235 Std. Deviation 3.72886 1.27187 4.87644 18 Mean 6.0000 2.1429 7.8750 Std. Deviation 3.75366 1.79320 5.28110 Total Mean 5.4400 1.7917 7.1600 Std. Deviation 3.48536 2.94470 5.67956 Total Mean 7.7059 3.2667 10.5882 <				Std. Deviation	3.46221	3.33431	6.39853
female scientific 17 Mean 8.7500 3.5385 11.6250 Std. Deviation 2.01660 4.07462 5.54827 18 Mean 9.2222 4.2500 13.0000 Std. Deviation 2.38630 3.88219 5.85235 Total Mean 8.9200 3.8095 12.1200 Std. Deviation 2.11975 3.91943 5.57763 literary 17 Mean 5.1765 1.6471 6.8235 Std. Deviation 3.72886 1.27187 4.87641 18 Mean 6.0000 2.1429 7.8750 Std. Deviation 3.75366 1.79320 5.28110 Total Mean 5.4400 1.7917 7.1600 Std. Deviation 3.48536 2.94470 5.67956 18 Mean 7.7059 3.2667 10.5832 Std. Deviation 3.49162 3.11448 5.93076 Total Mean 7.1800 2.7333 9.6400 <tr< td=""><td></td><td></td><td>Total</td><td>Mean</td><td>7.6600</td><td>4.7955</td><td>11.8800</td></tr<>			Total	Mean	7.6600	4.7955	11.8800
Std. Deviation 2.01660 4.07462 5.54827 18 Mean 9.2222 4.2500 13.0000 Std. Deviation 2.38630 3.88219 5.85235 Total Mean 8.9200 3.8095 12.1200 Std. Deviation 2.11975 3.91943 5.57763 literary 17 Mean 5.1765 1.6471 6.8233 Std. Deviation 3.72886 1.27187 4.87644 18 Mean 6.0000 2.1429 7.8750 Std. Deviation 3.75366 1.79320 5.28110 Total Mean 5.4400 1.7917 7.1600 Std. Deviation 3.75366 1.79320 5.28110 Total Mean 7.7059 3.2667 10.5882 Std. Deviation 3.48536 2.94470 5.67956 18 Mean 7.7059 3.2667 10.5882 Std. Deviation 3.49162 3.11448 5.9307 Total Mean 8				Std. Deviation	3.21101	3.33815	6.25199
18 Mean 9.2222 4.2500 13.0000 Std. Deviation 2.38630 3.88219 5.85235 Total Mean 8.9200 3.8095 12.1200 Std. Deviation 2.11975 3.91943 5.57763 Iiterary 17 Mean 5.1765 1.6471 6.8235 Std. Deviation 3.72886 1.27187 4.87641 18 Mean 6.0000 2.1429 7.8750 Std. Deviation 3.72886 1.27187 4.87641 18 Mean 6.0000 2.1429 7.8750 Std. Deviation 3.75366 1.79320 5.28110 Total Mean 5.4400 1.7917 7.1600 Std. Deviation 3.48536 2.94470 5.67958 Std. Deviation 3.48437 6.0931 2.4667 9.1516 Total Mean 7.71800 2.7333 9.6400 Std. Deviation 3.54903 3.47371 6.46199 Total M	female	scientific	17	Mean	8.7500	3.5385	11.6250
Std. Deviation 2.38630 3.88219 5.85235 Total Mean 8.9200 3.8095 12.1200 Std. Deviation 2.11975 3.91943 5.57763 literary 17 Mean 5.1765 1.6471 6.8235 Std. Deviation 3.72886 1.27187 4.87644 18 Mean 6.0000 2.1429 7.8750 Std. Deviation 4.00000 2.79455 6.35694 Total Mean 5.4400 1.7917 7.1600 Std. Deviation 3.75366 1.79320 5.28110 Total Mean 6.9091 2.4667 9.1516 Std. Deviation 3.48536 2.94470 5.67958 Std. Deviation 3.54903 3.47371 6.46199 Total Mean 7.1800 2.7333 9.6400 Std. Deviation 3.54903 3.47371 6.46199 Total Mean 8.7273 4.6296 12.5152 Std. Deviation 2.61334 </td <td></td> <td></td> <td></td> <td>Std. Deviation</td> <td>2.01660</td> <td>4.07462</td> <td>5.54827</td>				Std. Deviation	2.01660	4.07462	5.54827
Total Mean 8.9200 3.8095 12.1200 Std. Deviation 2.11975 3.91943 5.57763 literary 17 Mean 5.1765 1.6471 6.8235 Std. Deviation 3.72886 1.27187 4.87644 18 Mean 6.0000 2.1429 7.8750 Std. Deviation 4.00000 2.79455 6.35694 Total Mean 5.4400 1.7917 7.1600 Std. Deviation 3.75366 1.79320 5.28110 Total Mean 5.4400 1.7917 7.1600 Std. Deviation 3.48536 2.94470 5.67958 18 Mean 7.7059 3.2667 10.5882 Std. Deviation 3.54903 3.47371 6.46199 Total Mean 7.7059 3.2667 10.5882 Std. Deviation 3.54903 3.47371 6.46199 Total Mean 7.1800 2.7333 9.6400 Std. Deviation 3			18	Mean	9.2222	4.2500	13.0000
Std. Deviation 2.11975 3.91943 5.57763 literary 17 Mean 5.1765 1.6471 6.8235 Std. Deviation 3.72886 1.27187 4.87644 18 Mean 6.0000 2.1429 7.8750 Std. Deviation 4.00000 2.79455 6.35694 Total Mean 5.4400 1.7917 7.1600 Std. Deviation 3.75366 1.79320 5.28110 Total Mean 6.9091 2.4667 9.1515 Std. Deviation 3.48536 2.94470 5.67958 18 Mean 7.7059 3.2667 10.5882 Std. Deviation 3.54903 3.47371 6.46199 Total Mean 7.1800 2.7333 9.6400 Std. Deviation 3.49162 3.11448 5.93076 Total Mean 7.1800 2.7333 9.6400 Std. Deviation 3.49162 3.11448 5.93076 Total Mean				Std. Deviation	2.38630	3.88219	5.85235
literary 17 Mean 5.1765 1.6471 6.8236 Std. Deviation 3.72886 1.27187 4.87641 18 Mean 6.0000 2.1429 7.8750 Std. Deviation 4.00000 2.79455 6.35694 Total Mean 5.4400 1.7917 7.1600 Std. Deviation 3.75366 1.79320 5.28110 Total Mean 6.9091 2.4667 9.1515 Std. Deviation 3.48536 2.94470 5.67956 18 Mean 7.7059 3.2667 10.5882 Std. Deviation 3.54903 3.47371 6.46199 Total Mean 7.1800 2.7333 9.6400 Std. Deviation 3.49162 3.11448 5.93076 Total Mean 7.1800 2.7333 9.6400 Std. Deviation 2.61334 3.88437 6.09366 18 Mean 8.7273 4.6296 12.5152 Std. Deviation 2.671			Total	Mean	8.9200	3.8095	12.1200
Std. Deviation 3.72886 1.27187 4.87641 18 Mean 6.0000 2.1429 7.8750 Std. Deviation 4.00000 2.79455 6.35694 Total Mean 5.4400 1.7917 7.1600 Std. Deviation 3.75366 1.79320 5.28110 Total 17 Mean 6.9091 2.4667 9.1515 Std. Deviation 3.48536 2.94470 5.67958 18 Mean 7.7059 3.2667 10.5882 Std. Deviation 3.54903 3.47371 6.46199 Total Mean 7.1800 2.7333 9.6400 Std. Deviation 3.49162 3.11448 5.93076 Total Mean 8.7273 4.6296 12.5152 Std. Deviation 2.61334 3.88437 6.09365 18 Mean 8.4118 4.8000 12.6471 Std. Deviation 2.67177 3.8220 6.08496 Iterary 17 Mean<				Std. Deviation	2.11975	3.91943	5.57763
18 Mean 6.000 2.1429 7.8750 Std. Deviation 4.00000 2.79455 6.35694 Total Mean 5.4400 1.7917 7.1600 Std. Deviation 3.75366 1.79320 5.28110 Total 17 Mean 6.9091 2.4667 9.1515 Std. Deviation 3.48536 2.94470 5.67958 18 Mean 7.7059 3.2667 10.5882 Std. Deviation 3.54903 3.47371 6.46199 Total Mean 7.1800 2.7333 9.6400 Std. Deviation 3.49162 3.11448 5.93076 Total Mean 8.7273 4.6296 12.5152 Std. Deviation 2.61334 3.88437 6.09366 18 Mean 8.4118 4.8000 12.6471 Std. Deviation 2.67177 3.8220 6.08496 Std. Deviation 2.67177 3.8220 6.08496 Std. Deviation 3.48021		literary	17	Mean	5.1765	1.6471	6.8235
Std. Deviation 4.00000 2.79455 6.35694 Total Mean 5.4400 1.7917 7.1600 Std. Deviation 3.75366 1.79320 5.28110 Total 17 Mean 6.9091 2.4667 9.1515 Std. Deviation 3.48536 2.94470 5.67958 18 Mean 7.7059 3.2667 10.5822 Std. Deviation 3.54903 3.47371 6.46199 Total Mean 7.1800 2.7333 9.6400 Std. Deviation 3.54903 3.47371 6.46199 Total Mean 7.1800 2.7333 9.6400 Std. Deviation 3.49162 3.11448 5.93076 Total Mean 8.7273 4.6296 12.5152 Std. Deviation 2.61334 3.88437 6.09365 18 Mean 8.4118 4.8000 12.6401 Std. Deviation 2.67177 3.8220 6.08498 Std. Deviation 3.48021				Std. Deviation	3.72886	1.27187	4.87641
Total Mean 5.4400 1.7917 7.1600 Std. Deviation 3.75366 1.79320 5.28110 Total 17 Mean 6.9091 2.4667 9.1515 Std. Deviation 3.48536 2.94470 5.67958 18 Mean 7.7059 3.2667 10.5882 Std. Deviation 3.54903 3.47371 6.46199 Total Mean 7.1800 2.7333 9.6400 Std. Deviation 3.49162 3.11448 5.93076 Total Mean 7.1800 2.7333 9.6400 Std. Deviation 3.49162 3.11448 5.93076 Total Scientific 17 Mean 8.7273 4.6296 12.5152 Std. Deviation 2.61334 3.88437 6.09365 12.5600 Std. Deviation 2.85173 3.83964 6.25441 Total Mean 8.6200 4.6905 12.5600 Std. Deviation 2.67177 3.82220 6.08498			18	Mean	6.0000	2.1429	7.8750
Std. Deviation 3.75366 1.79320 5.28110 Total 17 Mean 6.9091 2.4667 9.1515 Std. Deviation 3.48536 2.94470 5.67958 18 Mean 7.7059 3.2667 10.5882 Std. Deviation 3.54903 3.47371 6.46199 Total Mean 7.1800 2.7333 9.6400 Std. Deviation 3.49162 3.11448 5.93076 Total Mean 7.1800 2.7333 9.6400 Std. Deviation 3.49162 3.11448 5.93076 Total Mean 8.7273 4.6296 12.5152 Std. Deviation 2.61334 3.88437 6.09365 18 Mean 8.4118 4.8000 12.6471 Std. Deviation 2.67177 3.8220 6.08498 Iterary 17 Mean 8.6200 4.6905 12.5600 Std. Deviation 2.67177 3.8220 6.08498 6.07282				Std. Deviation	4.00000	2.79455	6.35694
Total 17 Mean Std. Deviation 6.9091 2.4667 9.1515 Std. Deviation 3.48536 2.94470 5.67958 18 Mean 7.7059 3.2667 10.5882 Std. Deviation 3.54903 3.47371 6.46199 Total Mean 7.1800 2.7333 9.6400 Std. Deviation 3.49162 3.11448 5.93076 Total Mean 7.1800 2.7333 9.6400 Std. Deviation 3.49162 3.11448 5.93076 Total Mean 8.7273 4.6296 12.5152 Std. Deviation 2.61334 3.88437 6.09365 18 Mean 8.4118 4.8000 12.6471 Std. Deviation 2.85173 3.83964 6.25441 Total Mean 8.6200 4.6905 12.5600 Std. Deviation 2.67177 3.82220 6.08498 Iterary 17 Mean 6.2188 2.8667 8.9063 <t< td=""><td></td><td></td><td>Total</td><td>Mean</td><td>5.4400</td><td>1.7917</td><td>7.1600</td></t<>			Total	Mean	5.4400	1.7917	7.1600
Std. Deviation 3.48536 2.94470 5.67958 18 Mean 7.7059 3.2667 10.5882 Std. Deviation 3.54903 3.47371 6.46199 Total Mean 7.1800 2.7333 9.6400 Std. Deviation 3.49162 3.11448 5.93076 Total Scientific 17 Mean 8.7273 4.6296 12.5152 Std. Deviation 2.61334 3.88437 6.09365 12.6471 Std. Deviation 2.61334 3.83964 6.25441 Total Mean 8.4118 4.8000 12.6471 Std. Deviation 2.67177 3.8220 6.08498 Iterary 17 Mean 6.2188 2.8667 8.9063 Std. Deviation 2.67177 3.8220 6.08498 3.48021 2.67470 5.67598 Iterary 17 Mean 6.2218 2.8667 8.9063 Std. Deviation 3.48021 2.67470 5.67598 5.67598 <				Std. Deviation	3.75366	1.79320	5.28110
18 Mean 7.7059 3.2667 10.582 Std. Deviation 3.54903 3.47371 6.46199 Total Mean 7.1800 2.7333 9.6400 Std. Deviation 3.49162 3.11448 5.93076 Total Scientific 17 Mean 8.7273 4.6296 12.5152 Std. Deviation 2.61334 3.88437 6.09365 12.6471 Std. Deviation 2.61334 3.88437 6.09365 18 Mean 8.4118 4.8000 12.6471 Std. Deviation 2.85173 3.83964 6.25441 Total Mean 8.6200 4.6905 12.5600 Std. Deviation 2.67177 3.82220 6.08498 Iiterary 17 Mean 6.2188 2.8667 8.9063 Std. Deviation 3.48021 2.67470 5.67598 18 Iiterary 17 Mean 6.2222 3.0000 9.0556 Std. Deviation 3.75038		Total	17		6.9091	2.4667	9.1515
Std. Deviation 3.54903 3.47371 6.46199 Total Mean 7.1800 2.7333 9.6400 Std. Deviation 3.49162 3.11448 5.93076 Total scientific 17 Mean 8.7273 4.6296 12.5152 Std. Deviation 2.61334 3.88437 6.09365 12.6173 18 Mean 8.4118 4.8000 12.6471 Std. Deviation 2.85173 3.83964 6.25441 Total Mean 8.6200 4.6905 12.5600 Std. Deviation 2.67177 3.82220 6.08496 Iterary 17 Mean 6.2188 2.8667 8.9063 Std. Deviation 3.48021 2.67470 5.67596 556 <td></td> <td></td> <td></td> <td></td> <td>3.48536</td> <td>2.94470</td> <td>5.67958</td>					3.48536	2.94470	5.67958
Total Mean 7.1800 2.7333 9.6400 Std. Deviation 3.49162 3.11448 5.93076 Total scientific 17 Mean 8.7273 4.6296 12.5152 Std. Deviation 2.61334 3.88437 6.09365 12.6471 Std. Deviation 2.85173 3.83964 6.25441 Total Mean 8.6200 4.6905 12.5600 Std. Deviation 2.67177 3.82220 6.08498 Iterary 17 Mean 6.2188 2.8667 8.9063 Std. Deviation 2.67177 3.8220 6.08498 6.07282 Iterary 17 Mean 6.2188 2.8667 8.9063 Std. Deviation 3.48021 2.67470 5.67598 18 Mean 6.2222 3.0000 9.0556 Std. Deviation 3.75038 2.78388 6.07282 Total Mean 6.2200 2.9149 8.9600 Std. Deviation 3.54153			18	Mean		3.2667	10.5882
Std. Deviation 3.49162 3.11448 5.93076 Total scientific 17 Mean 8.7273 4.6296 12.5152 Std. Deviation 2.61334 3.88437 6.09365 18 Mean 8.4118 4.8000 12.6471 Std. Deviation 2.85173 3.83964 6.25441 6.25441 Total Mean 8.6200 4.6905 12.5600 Std. Deviation 2.85173 3.83964 6.25441 Total Mean 8.6200 4.6905 12.5600 Std. Deviation 2.67177 3.8220 6.08498 Iterary 17 Mean 6.2188 2.8667 8.9063 Std. Deviation 3.48021 2.67470 5.67598 5.67598 18 Mean 6.2222 3.0000 9.0556 Std. Deviation 3.75038 2.78388 6.07282 Total Mean 6.2200 2.9149 8.9600 Std. Deviation 3.54153 2.68514 5.76038 </td <td></td> <td></td> <td></td> <td>Std. Deviation</td> <td>3.54903</td> <td>3.47371</td> <td>6.46199</td>				Std. Deviation	3.54903	3.47371	6.46199
Total scientific 17 Mean 8.7273 4.6296 12.5152 Std. Deviation 2.61334 3.88437 6.09365 18 Mean 8.4118 4.8000 12.6471 Std. Deviation 2.85173 3.83964 6.25441 Total Mean 8.6200 4.6905 12.6600 Std. Deviation 2.67177 3.82220 6.08498 Iiterary 17 Mean 6.2188 2.8667 8.9063 Std. Deviation 3.48021 2.67470 5.67598 18 Mean 6.2222 3.0000 9.0556 18 Mean 6.2200 2.9149 8.9600 3.75038 2.78388 6.07282 Total Mean 6.2200 2.9149 8.9600 3.54153 2.68514 5.76039			Total				9.6400
Std. Deviation 2.61334 3.88437 6.09365 18 Mean 8.4118 4.8000 12.6471 Std. Deviation 2.85173 3.83964 6.25441 Total Mean 8.6200 4.6905 12.6600 Std. Deviation 2.67177 3.8220 6.08498 Iiterary 17 Mean 6.2188 2.8667 8.9063 Std. Deviation 3.48021 2.67470 5.67598 18 Mean 6.2222 3.0000 9.0556 18 Mean 6.2200 2.9149 8.9600 Std. Deviation 3.75038 2.78388 6.07282 Total Mean 6.2200 2.9149 8.9600 Std. Deviation 3.54153 2.68514 5.76039				Std. Deviation	3.49162	3.11448	5.93076
18 Mean 8.4118 4.8000 12.6471 Std. Deviation 2.85173 3.83964 6.25441 Total Mean 8.6200 4.6905 12.6600 Std. Deviation 2.67177 3.82220 6.08498 Iiterary 17 Mean 6.2188 2.8667 8.9063 Std. Deviation 3.48021 2.67470 5.67598 18 Mean 6.2222 3.0000 9.0556 Std. Deviation 3.75038 2.78388 6.07282 Total Mean 6.2200 2.9149 8.9600 Std. Deviation 3.54153 2.68514 5.76038	Total	scientific	17		8.7273	4.6296	12.5152
Std. Deviation 2.85173 3.83964 6.25441 Total Mean 8.6200 4.6905 12.5600 Std. Deviation 2.67177 3.82220 6.08498 literary 17 Mean 6.2188 2.8667 8.9063 Std. Deviation 3.48021 2.67470 5.67598 18 Mean 6.2222 3.0000 9.0556 Std. Deviation 3.75038 2.78388 6.07282 Total Mean 6.2200 2.9149 8.9600 Std. Deviation 3.54153 2.68514 5.76038				Std. Deviation	2.61334	3.88437	6.09365
Total Mean 8.6200 4.6905 12.5600 Std. Deviation 2.67177 3.82220 6.08498 literary 17 Mean 6.2188 2.8667 8.9063 Std. Deviation 3.48021 2.67470 5.67598 18 Mean 6.2222 3.0000 9.0556 Std. Deviation 3.75038 2.78388 6.07282 Total Mean 6.2200 2.9149 8.9600 Std. Deviation 3.54153 2.68514 5.76038			18		8.4118	4.8000	12.6471
Std. Deviation 2.67177 3.82220 6.08498 literary 17 Mean 6.2188 2.8667 8.9063 Std. Deviation 3.48021 2.67470 5.67598 18 Mean 6.2222 3.0000 9.0556 Std. Deviation 3.75038 2.78388 6.07282 Total Mean 6.2200 2.9149 8.9600 Std. Deviation 3.54153 2.68514 5.76039					2.85173	3.83964	6.25441
literary 17 Mean 6.2188 2.8667 8.9063 Std. Deviation 3.48021 2.67470 5.67598 18 Mean 6.2222 3.0000 9.0556 Std. Deviation 3.75038 2.78388 6.07282 Total Mean 6.2200 2.9149 8.9600 Std. Deviation 3.54153 2.68514 5.76039			Total	Mean	8.6200	4.6905	12.5600
Std. Deviation 3.48021 2.67470 5.67598 18 Mean 6.2222 3.0000 9.0556 Std. Deviation 3.75038 2.78388 6.07282 Total Mean 6.2200 2.9149 8.9600 Std. Deviation 3.54153 2.68514 5.76039				Std. Deviation	2.67177	3.82220	6.08498
18 Mean 6.2222 3.0000 9.0556 Std. Deviation 3.75038 2.78388 6.07282 Total Mean 6.2200 2.9149 8.9600 Std. Deviation 3.54153 2.68514 5.76038		literary	17	Mean	6.2188	2.8667	8.9063
Std. Deviation 3.75038 2.78388 6.07282 Total Mean 6.2200 2.9149 8.9600 Std. Deviation 3.54153 2.68514 5.76039				Std. Deviation	3.48021	2.67470	5.67598
Total Mean 6.2200 2.9149 8.9600 Std. Deviation 3.54153 2.68514 5.76039			18	Mean	6.2222	3.0000	9.0556
Std. Deviation 3.54153 2.68514 5.76039							6.07282
			Total		6.2200		8.9600
Total 17 Mean I 7,4923 3,7018 10,7385							5.76039
		Total	17		7.4923	3.7018	10.7385
				Std. Deviation	3.29831	3.39098	6.12188
18 Mean 7.2857 3.8438 10.8000			18	Mean	7.2857	3.8438	10.8000
							6.33756
			Total		7.4200		10.7600
Std. Deviation 3.34598 3.37195 6.16625				Std. Deviation	3.34598	3.37195	6.16625

Report

11. Independent variables

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
recognition	Equal variances assumed	.196	.659	.293	98	.770
	Equal variances not assumed			.288	66.615	.774
production	Equal variances assumed	.080	.778	190	87	.850
	Equal variances not assumed			190	64.369	.850
total degree	Equal variances assumed	.073	.788	047	98	.962
	Equal variances not assumed			047	67.673	.963

Independent Samples Test

12. T-test

Group Statistics

	gender	N	Mean	Std. Deviation
recognition	male	50	7.6600	3.21101
	female	50	7.1800	3.49162
production	male	44	4.7955	3.33815
	female	45	2.7333	3.11448
total degree	male	50	11.8800	6.25199
	female	50	9.6400	5.93076

13. Independent Sample test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
recognition	Equal variances assumed	.099	.753	.716	98	.476
	Equal variances not assumed			.716	97.320	.476
production	Equal variances assumed	.132	.717	3.014	87	.003
	Equal variances not assumed			3.012	86.271	.003
total degree	Equal variances assumed	.190	.664	1.838	98	.069
	Equal variances not assumed			1.838	97.729	.069

14. T-test

Group Statistics

	stream	N	Mean	Std. Deviation
recognition	scientific	50	8.6200	2.67177
	literary	50	6.2200	3.54153
production	scientific	42	4.6905	3.82220
	literary	47	2.9149	2.68514
total degree	scientific	50	12.5600	6.08498
	literary	50	8.9600	5.76039

15. Independent Samples test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
recognition	Equal variances assumed	5.638	.020	3.825	98	.000
	Equal variances not assumed			3.825	91.129	.000
production	Equal variances assumed	9.796	.002	2.557	87	.012
	Equal variances not assumed			2.508	72.559	.014
total degree	Equal variances assumed	.406	.525	3.038	98	.003
	Equal variances not assumed			3.038	97.707	.003

16. Test Reliability Analysis

Reliability of the Questionnaire Test

Method 1 (space saver) will be used for this analysis*****

RELIABILITY ANALYSIS - SCALE (ALPHA(

	N of			
Statistics for	Mean	Variance	Std Dev	Variables
SCALE	3.5900	2.3858	1.5446	5

Reliability Coefficients

N of Cases = 100.0 N of Items = 5

Alpha = .7496

Reliability of the Recognition Test

****** Method 1 (space saver) will be used for this analysis*****

RELIABILITY ANALYSIS - SCALE (ALPHA(

N of Statistics for Mean Variance Std Dev Variables SCALE 6.7100 15.5211 3.9397 12

Reliability Coefficients

N of Cases = 100.0 N of Items = 12

Alpha = .8933

Reliability of the Production Test

***** Method 1 (space saver) will be used for this analysis ******

RELIABILITY ANALYSIS - SCALE (ALPHA(

	N of			
Statistics for	Mean	Variance	Std Dev	Variables
SCALE	8.3636	7.5758	2.7524	12

Reliability Coefficients

N of Cases = 22.0 N of Items = 12

Alpha = .6639