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Diagnosis Assessment in Grammar Teaching as a Support to Instructional Decision Making.

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Dedications

I dedicate this thesis to my parents, my family; to my husband whose advice, encouragement and patience support me a lot and to my beloved children: Meriem, Mohamed and Zineb.

This work is also dedicated to my brothers, sisters and their children.

Abstract

Assessments are mainly used to support the teaching process. Language teaching and testing are two strongly interrelated concepts. As grammar is the core constituent of any language, it has a central importance in language teaching as well as testing. Data assessment mainly diagnostic assessment form one of the functional types of data used to make decisions that improve instruction. Diagnostic testing helps teachers to determine the learners' difficulties and tailor teaching to their needs. Accordingly, the present thesis is, actually, an attempt to find out how data obtained from diagnostic grammar assessments should be examined and used as a support to make effective instructional decisions to improve and support students' grammar learning. One of the most useful approaches that have been proposed for educational diagnosis is error analysis. Areas of grammar complexity in any grammar point can be realized by identifying and analyzing errors which the student commits and his/her possible reasons. The results of diagnostic tests coupled with error analysis can be successfully used in planning the suitable remedial teaching. To achieve the aforementioned objectives, a particular research instrument was chosen for this study. A diagnostic test was designed to determine areas of strengths and weaknesses of learners in forming wh-questions as a case study and the factors that lead to them. The analysis of the obtained data revealed that effective teaching of grammar is based on the teachers' ability of making the best decisions of instructional grammar delivery concerning what and how to teach grammar in the most efficient and successful ways based on the diagnostic assessment results. They can adapt their teaching models, strategies, methods, and skills and other classroom techniques to help all students in the classroom achieve their academic potential taking in consideration their different levels of ability and different learning styles. The analysis also showed that that those learners had difficulties with all the structures mainly questions with (what + a form of 'do'), 'do' support and inversion. It also showed that the most frequent grammatical errors concerning the case study were, absence of subject- operator inversion, wrong verbs and auxiliaries forms, wrong tenses and misselection of wh-words. Another significant finding is that most of such errors were not due to L1 interference but to intralingual factors mainly overgeneralization and the total ignorance of rule.

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List of Abbreviations and Acronyms

BADT: The Birmingham Assessment and Diagnostic Test

CA   : Contrastive Analysis

DCT :   Dialogue (or discourse) Completion Task

EA: Error Analysis

EFL: English as a Foreign Language

ELBA: The English Language Battery

EPTB: The English Proficiency Test Battery or Davies Test

ESA: Engage, Study, Activate

L1: First Language

L2: Second Language

MC: Multiple-choice

PPP: Presentation, Practice, Production

Q: Question

SLA: Second Language Acquisition

TL: Target Language

TOEFL: The Test of English as a Foreign Language

TTT: Test, Teach, Test

ZPD: Zone of Proximal Development

List of Symbols

%:   per cent

√:   Missing word

_____: The underlined words are grammatical errors (Wrong Answers) (In chapter three)

_____: The underlined words with two lines are the words targeted for the questions

GENERAL INTRODUCTION

There are teachers who find documenting students' progress as a hard and time consuming task. At the beginning of the year, they have to design diagnostic tests generally in grammar to assess learners and measure their performance through giving scores that must be handed in to administrators and then keep them away. They spend much time in doing so, but they do not take time to analyze and use the information obtained from students' performance on these tests to target problems and set appropriate solutions. In other words, they do not benefit from data obtained from these assessments to make efficient instructional decisions that meet individual needs or the class as a whole. Possibly, it seems for them to be as an obligatory task for administrative purposes rather than being a tool for bettering education or simply lack of knowledge and skills to do so as a source of such behaviour. However, before teaching any aspect of language either at the beginning of the year, term or just a course, language teachers should know their learners' prior knowledge and skills as well as their strengths and weaknesses in that particular area. Grammar strengths and weaknesses cannot be seen directly without referring back to the learners' behaviour, exactly the linguistic behaviour. For this reason, using diagnostic grammar assessments before a grammar course starts is of a paramount significance since it helps teachers to tailor their teaching to their learners' needs. Assessment data form one of the functional types of data used to make decisions that improve instruction.

Accordingly, this research work is conducted for the purpose of finding out how data obtained from diagnostic grammar assessments should be examined and used to improve instruction and support students' grammar learning through answering the following questions:

1- How should teachers design and implement efficient diagnostic grammar tests?
2- How should data obtained from these tests be examined and interpreted?
3- How can teachers build instruction based on these data so that they can improve the quality of grammar teaching and learning?

The present work tries to find appropriate answers and provide arguments for or against the research hypotheses that can be formulated as follows:

1- A diagnostic grammar test can be efficient if it can determine clearly areas of strengths and weaknesses for individual students. Hence, teachers should define clearly the abilities that are intended to be measured and how well these abilities can be reflected in the test items.

2- To identify areas of strengths and weaknesses for individual students, assessment sheets including learners' responses should be analyzed using a well-organized approach. One of the approaches that have been proposed for educational diagnostic assessment is error analysis to provide more informative and diagnostic results. In this study, it will be used to examine and interpret the test results.

3- Teachers have the responsibility to support every student and therefore they should adapt instruction based on individual strengths, weaknesses and interests. Depending on the data obtained, instructors can also adapt pedagogy; keep using what is successful and change what is not. Teaching objectives can be adapted in consideration to teaching priorities. Based on the diagnostic assessment results, important instructional decisions can be made in the instructional planning phase concerning lesson plans, teaching strategies, methods of delivering instruction, learners' grouping, and other classroom techniques to help all learners achieve the desired learning outcomes.

This study is restricted to forming wh-questions as one of the most essential aspects that students need to master not only in speaking, but also in writing and as an effective tool for learning and communication in general. It is not just for this but because in our previous research, we found that learners have difficulty to do such task. Another reason is that it is one of the most common questions in "BAC" exam. A lack of ability to ask wh-questions can also lead to difficulty in producing questions to complete the discourse task in "BAC" exam if the question is to complete a dialogue.

The present research work is an attempt to uncover to which extent the abovementioned hypotheses are valid or invalid. Therefore, the researcher used a diagnostic test to get a wide range of data on the target learners' difficulties. The diagnostic grammar test focuses on the basic knowledge of asking wh-questions. Through the errors that they make, one can pinpoint areas that form difficulties for them and the reasons behind them. Because of the time constraints and the difficulties of gathering and analyzing the information, a sample population was used to represent the total one, using both of quantitative and qualitative research methods.

In terms of the general lay-out, the work comprises four chapters to complete the final draft of the would-be Doctorate thesis.

The first chapter tackles some of the theoretical concepts deals with how educational diagnosis can be practised to promote learning. First, it offers basic definitions of assessment with highlighting the distinction between assessment, testing, measurement and evaluation. Then, attempts have been made to seek the distinction between assessment of learning and assessment for learning giving a special consideration to assessment for learning. The discussion on the difference between them draws attention to the distinction between assessment for summative, formative and diagnostic purposes. More importantly, this chapter tackles the central issues governing educational diagnostic assessment particularly of grammar. It gives an overall overview of diagnostic assessment historical background and the possible reasons behind the scarcity and brevity of treatment of diagnostic testing in the second or foreign language education. In spite of the fact that there was a great confusion about the exact definition of diagnostic testing and what it can include, this chapter attempts to give definitions, determines the constituents of a well-prepared diagnostic tests and the essential steps in constructing such tests. In this chapter and before dealing with grammar diagnosis, it is appropriate to give a brief overview of what grammar is and the common approaches to teach and test it. Then, it provides a brief historical background of grammar diagnosis through indicating some early treatments of grammar diagnosis in language testing. A good diagnostic grammar test should provide a detailed picture of the learners' grammar strengths and weaknesses in a particular area. Hence, this chapter sheds light on the criteria of an efficient diagnostic grammar test, the essential stages in its construction and the necessary steps of diagnosis process. It also addresses the different types of tasks introduced in grammar tests in general and the sorts of items suitable for grammar diagnosis. Although teachers strive hard to make their tests useful, they may find difficulties in assessing their pupils' grammatical ability. At the end of this chapter, some limitations of diagnostic tests have been mentioned.

Chapter two addresses some issues concerning how data obtained from these tests should be examined and interpreted. This is through highlighting some concepts related to error analysis. These concepts involve a theoretical background of this method, its models and sources of errors. Before dealing with that, it is important to shed light on the difference between the terms error and mistake because many people often use them synonymously and interchangeably in spite of their considerable differences. Since this work attempts to examine and discuss problems that EFL learners encounter when constructing wh-questions in English, it is worthwhile to provide a general overview of the theoretical background of the problem under study, starting with the different types of wh- questions with a special focus on

wh- information questions and the correct structure in each type. Chapter two also refers to their native language as one of the main possible sources of such difficulties. It studies the differences and the similarities in forming such type of questions in English and Arabic and their possible effects in the occurrence of errors. To be more acquainted with the topic under study, this chapter presents a summary and short presentation of the works available in the related topic with Arab EFL learners and with Non-Arab EFL learners. Next, this chapter describes the research methodology followed to conduct this research work and the rationale of the study. It attempts to explain the research objectives and the research design. It also describes the sample population of the study and mentions its limitations. Then, it highlights the procedures followed to conduct this research work. Finally, it describes the instruments used in this study and the coding system adopted to identify and categorize the students' errors.

The third chapter presents and discusses the data findings obtained from the diagnostic grammar test in a statistical form in tables, graphs and pie charts. It also provides an interpretation of the results in an attempt to answer the questions raised by this research work. The test includes 23 questions representing the different structures of wh-questions and including different wh- words, tenses and forms. The learners' responses were studied and analyzed. This study is based on the analysis of each type of structure separately for the purpose of finding out which types presented more difficulty and the errors that the pupils made when forming these particular structures. First, it provides an overall description of the learners' level in this particular point of grammar by means of the test marks and at the same time their difficulties in other linguistic points that are included in the course of wh-questions formation such as correct forms of auxiliaries and verbs in different tenses. In addition, this chapter attempts to find out the reasons behind the occurrence of these numerous grammatical errors.

Chapter four provides current information about how teachers can make instructional decisions based on diagnostic assessment data to support and advance grammar teaching and learning. It starts with the necessity of effective teaching as effective decision making through shedding light on some concepts that involve its definition, its relation with student learning and its dimensions focusing on instructional effectiveness as a crucial element of effective teaching. It highlights the significance of diagnostic assessment to effective instruction. It offers teachers a framework of things to be considered before and when making decisions about grammar teaching. The success of implementing something depends on the effectiveness of its planning and design. Hence, this chapter presents the necessary stages of

educational decision process through which they make and implement decisions on the basis of deep analysis of the problem. Accordingly, they can shape their use of specific instructional practices and thoughts and make alternative decisions. Hence, this part provides a framework of how teachers can respond to data and adapt their teaching practices and tasks such as lesson planning, strategies and techniques to get all their learners achieve their academic potential. At the end and to overcome their difficulties in learning English wh-questions, chapter four proposes some perceptions and strategies to do so. This chapter attempts to provide suggestions about the ways in which forming wh-questions English should be taught and assessed at this level. Depending on the obtained data concerning the most committed grammatical errors, chapter four tries to give teachers an idea of how to deal with such grammatical errors, how to explore them to foster the learners' grammatical ability, which grammar points to focus on before and when teaching wh-questions to EFL learners; and how to sequence grammar instruction in general.

CHAPTER ONE:

Diagnostic Grammar

Assessment

Chapter one:
Diagnostic Grammar Assessment

1.1.   Introduction

Teaching and testing are strongly interconnected concepts which complement each other. Testing is an efficient means to mirror the effectiveness of teaching since it determines whether or not the teaching objectives are being achieved. The effectiveness of diagnostic testing as one of the most beneficial and necessary assessments has a paramount role in adjusting teaching for the purpose of improving learning. Due to such vital importance, the present work deals with some theoretical concepts related to language assessment in general and diagnostic assessment in particular with a special focus on grammar, and how information obtained from this type of assessment can be used in instructional- making decisions.

This chapter concerns how educational diagnosis can be practised so that it has a role in helping learning. First, it offers basic definitions of assessment with highlighting the distinction between assessment, testing, measurement and evaluation. Then, attempts have been made to seek the distinction betweenassessment of learning and assessment for learningwith giving a special consideration to assessment for learning. The discussion on the difference between them draws attention to the distinction between assessment for summative, formative and diagnostic purposes.

More importantly, this chapter tackles the central issues governing educational diagnostic assessment particularly of grammar. It gives an overall overview of diagnostic assessment historical background and the possible reasons behind the scarcity and brevity of treatment of diagnostic testing in the second or foreign language education. In spite of the fact that there was a great confusion about the exact definition of diagnostic testing and what it can include, an attempt to deal with that has been made. The major aim of diagnostic tests is to identify specific areas of weaknesses and the exact nature of such weaknesses along with the possible reasons. And this can only be confirmed through especially well-prepared diagnostic tests. In this chapter, the essential steps in constructing such tests are going to be mentioned.

The study of grammar is viewed as a basic component of learning a foreign language and mastering key grammatical concepts helps L2 learners to achieve both accuracy and proficiency in that language. Due to such importance, the focus of diagnostic assessment has much been on grammar. In this chapter and before dealing with grammar diagnosis, it is appropriate to give a brief overview of what grammar is and the common approaches to teach and test it. Then, it provides a brief historical background of grammar diagnosis through indicating some early treatments of grammar diagnosis in language testing.

A good diagnostic grammar test should provide a detailed picture of the learners' grammar strengths and weaknesses in a particular area. Hence, this chapter sheds light on the criteria of an efficient diagnostic grammar test, the essential stages in its construction and the necessary steps of diagnosis process. It also addresses the different types of tasks introduced in grammar tests in general and the sorts of items suitable for grammar diagnosis in particular. Although teachers strive hard to make their tests useful, they may find difficulties in assessing their pupils' grammatical ability and identifying areas of strengths and weaknesses. To deal with this point, some limitations of diagnostic tests have been mentioned at the end of this chapter.

1.2.   Assessment vs Evaluation and Measurement

The term assessment can refer to a variety of meanings and can be used synonymously and interchangeably with other terminologies such as testing or evaluation in spite of their considerable differences. However, it can be a broad term that covers all.

The word assessment is derived from the Latin *"assidere",* meaning to "to sit beside or with" (Wiggins, 1993 as cited in Earl, 2013, p. 25). It has a relation with the notion of a teacher sitting with his/her students to really understand what is happening as they pursue the challenges of learning. This role is far removed from the one that assessment and evaluation have typically played in schools (Earl et al, 2003).

In general, assessment is defined as the process of a systematic gathering and analyzing of data to make judgments and monitor progress. It means to check the quality of something through gathering and analyzing information in organized methods. Bachman defines assessment as "the process of collecting information about a given object of interest, according to procedures that are systematic and substantively grounded" (2004: 7). Assessment is systematic which means that the procedures that are followed can be carried again by another person at another time. Also, it is grounded which means that the assessment is based on a recognized content as a course syllabus (Bachman and Palmer, 2010). According to Kunnan, 2004, it refers to "all methods and approaches to testing and evaluation whether in research studies or educational contexts" (as cited in Lacorte, 2014, p. 269). This variety of methods of gathering information can be tests, surveys, observations, interviews, questionnaires or portfolios (Johnsen, 2004). However, not only is it limited to gathering information but it also uses learners' outcomes for the purpose of improving learning. Thus,

it is considered as "a powerful tool for all parties to learn in order to improve teaching, learning and achievement" (Cohen et al, 2010, p. 387).

Testing is the process of administering any method to collect information about individuals' abilities. Generally, it is known as the process of administering a test. Brown defines it as *''a method of measuring a person's ability or knowledge in a given area''* (1994, p. 252). Also, it is defined as *"any procedure for measuring ability, knowledge and performance"* (Richards et al, 1985, p. 291). Thus, tests serve as assessment methods for collecting information about pupils' learning to determine a student's ability to demonstrate knowledge. Hence, testing is an integral part of the teaching process. However, testing without teaching is unreliable. In this respect, Heaton states that *"both testing and teaching are so clearly interrelated that is virtually impossible to work in either field without being constantly concerned with the other" (*as cited in Hubbard et al, 1983, p. 256). It is considered as a beneficial means to enhance learning since it is viewed as a practical teaching strategy (Hubbard et al, 1983).

Evaluation is defined as collecting and analyzing data in order to make judgments and decisions. It is a process of providing information that helps in making judgments about a given situation (Kizlik, 2012). This situation may involve all that has a relation with the teaching/learning process. In this respect**,** Harris and McCann define evaluation as the "*consideration of all the factors that influence the learning process such as syllabus objective, course design, material, methodology and assessment"* (1994**,** p. 90). According to Tuchman (1975) evaluation is a process wherein the outcomes of a programme are examined to see whether they are satisfactory. The judgment comes at the end of the enquiry and it is based on making a qualification with reference to predetermined objectives.

Measurement is the process of evaluating and quantifying a particular quality or characteristic with reference to certain standards. In this respect, Bachman (1990) defines measurement as quantifying the characteristics of persons according to explicit rules. These characteristics can be their abilities, intelligence and motivation. Measurement also refers to the process by which a value is assigned to measure ability (Peers, 2006). This process of quantifying could be through assigning numerical values such as scores**.** According to McNamara (2000, p.56), measurement involves two main steps: quantification (numbers or scores to various outcomes of assessment) and checking various kinds of statistical patterning in order to investigate the extent to which the necessary properties are present in the assessment.

To conclude, the process of administering a test is known as testing. Tests are specific means used to measure the learners' abilities. However, in brief it can be said that the act of awarding grades to the responses of the test tasks is called measurement. This measurement is used in making decisions based on the assessment results and this is what is known as evaluation. Assessment through different methods of collecting data drives effective learning (Lee et al, 2008). Hence, the terms assessment, test, measurement and evaluation are clearly different but interrelated.

The testing process requires the use of different tests depending on the purposes they are intended for. The intended purposes that assessment serves in the classroom can be associated with different functions that lead to make different educational decisions.

1.3.   Functions of Assessment

Assessment is an integral part of the teaching learning process. It should not be in isolation form it. Its results are of great importance to make educational decisions at different levels: in the classroom, and outside the classroom. However, classroom assessment serves as a rich source to get significant and valuable information on teaching and learning. Its main role of teachers is to make their teaching effective to improve and extend their students' learning. In classroom, no other factor has more impact on pupils learning than a teacher. Teachers play a significant role when participating in decision making and must be able to use assessment results effectively. Assessment results can have two main benefits; namely evaluating the quality of their teaching and informing learners of their progress in learning. In the same vein, the term 'classroom assessment' can be defined as all the processes for collecting information, making interpretations and decisions based on the information on a daily basis in the classroom for the improvement of teaching and learning (Phelan and Phelan, 2010).

The traditional type of classroom assessment is most of time administered at the end of a course period with the purpose of assessing what learners have learned, and it is always separated from teaching. However, the nontraditional view consider assessment as an essential part in the teaching learning process; and its major purpose in education is supporting learning. "If assessment is to be a positive force in education, it must be implemented properly. It cannot be used to merely sort students or to criticize education. Its goals must be to improve education. Rather than 'teach to the test,' we must 'test what we teach.'" (Mclean, J. E and Lockwood R. E, as cited in Zygouris-Coe, 2014). This shift in

classroom assessment interests in both the learning process and learning outcomes. In a similar way, Linn and Gronlund (2000, as cited in Zhao, 2013) argue that classroom assessment can address both the learning process and learning outcomes: these measurements can provide ways for teachers to know both the effectiveness of the process used to perform a given task and the outcome of the performance. In this way, it has an essential role in the evaluation of the of learners' performance.

This change in the traditional concept and view of classroom assessment is due to the shift from behaviorist psychology to cognitive and constructive views of learning (Zhao, 2013). In this view, classroom assessment has become an important medium that can support and enhance learning…and learners are considered as active participants rather than passive test takers (Shepard, 2000 as cited in Zhao, 2013). Behavioural approaches view learning as a behavior. The behavior is observable and can be measured. Cognitive approaches explain learning as the acquisition of knowledge and the processing of information (Educational Research Techniques, 2015). Knowledge can be acquired through behaviours taken as a result of a direct contact with environment according to behaviourist view of learning. However, the cognitive approach views the acquisition of knowledge as a cognitive and developmental process.

This shift in classroom assessment perceptions and beliefs has been associated with two different types of assessment; *assessment of learning* and *assessment for learning*.

1.3.1.   Assessment of Learning and Assessment for Learning

Assessment of learning is designed to evaluate the learners' achievement evaluating their final product and it is particularly done at the end of a period of instruction. As noted by the Eberly Center for Teaching Excellence & Educational Ennovation at Carnegie Mellon University, *assessments of learning* are typically administered at the end of an instructional unit to evaluate a student's learning by comparing his or her work against some standard or benchmark. In a similar note, Linn and Gronlund (2000) postulated that, "The purpose of assessment that typically comes at the end of a course or unit of instruction is to determine the extent to which the instructional goals have been achieved and for grading or certification of student achievement" (as cited in Earl, 2013, p. 29).

Assessment for learning, also known as *assessments as learning*, is designed to assist students' learning during the learning teaching process. *Assessments for learning* are used to determine what learners know and can do during the learning process. They provide learners

with feedback and advice about the process of their learning. According to the the Eberly Center for Teaching Excellence & Educational Ennovation at Carnegie Mellon University as cited in Bennett (2017), they assess a student's comprehension and understanding of a skill or lesson during the learning and teaching process. This provides educators with ongoing feedback and allows them to:

- Identify at-risk students early

- Adjust instruction accordingly and immediately

- Monitor student progress

In this way, *assessments for learning* provide data that help educators to identify learners with specific needs and to shape instruction and set appropriate measures accordingly. Throughout the process of assessment for learning, teachers check the effectiveness of their intervention and instruction so as to close the students' learning gaps and monitor their progress (Bennett, 2017). In the same vein, Catherine Garrison and Michael Ehringhaus, PhD, authors of Formative and Summative Assessments in the Classroom, point out that the more information we can gather about students as they engage and advance in the learning process, the more equipped educators are with vital insight and data to adjust instruction and intervention plans (Garrison and Ehringhaus, 2011). This will help every student continue to move forward in their education. We can summarize the principles and qualities of *assessment for learning as an assessment which:*

- *is part of effective planning;*

- *focuses on how students learn;*

- *is central to classroom practice;*

- *is a key professional skill;*

- *is sensitive and constructive;*

- *fosters motivation;*

- *promotes understanding of goals and criteria;*

- *helps learners know how to improve;*

- *develops the capacity for self-assessment;*

- *recognizes all educational achievement.*

(ARG, 2002a, cited in Gardner, 2006, p. 3)

Undoubtedly, teachers should use within their instructional and intervention planning an assessment strategy which is more systematic and comprehensive, and which involves both

assessment of learning and *assessment for learning.* If they are used in a balanced and well-administered way, they will complement each other and act effectively and efficiently.

This comprehensive assessment strategy provides data on:

- How a student is progressing related to key foundational skills and measures
- And where a student's achievement level is compared to state standards and end-of-year targets

(ARG, 2002a, as cited in Gardner, 2006)

In this way, assessment has two main purposes – to help learning and to summarize what has been learned. Both purposes are central to effective educational practice (Gardner, 2006, p.103).

Depending on what has been mentioned above, there is a difference between *assessment of learning* and *assessment for learning.* This difference can be in the focus, methods and time of administration. Stiggins (2002) claims that in assessment for learning, the focus is much more on giving useful feedback to motivate learners and improve performance. However, in assessment of learning the emphasis is much more on providing evidence of learners' achievement. Gravells (2015, p. 3) asserts that assessment for learning is usually informal and formative as it is ongoing throughout the learning process. However, assessment of learning is often formal and summative as it occurs at the end of an aspect of learning.

The intended purposes that these assessments serve in the classroom can be associated with terms such as "summative functions", "formative functions" and "diagnostic functions ". In a specific way, the purpose of *assessment of learning* is usually *SUMMATIVE*. However, the purpose of *assessment for learning* is usually *DIAGNOSTIC* or *FORMATIVE*.

1.3.2.   Summative and Formative Functions

The predominant kind of assessment in schools is assessment of learning. Its function is summative; intended to certify learning and report to parents and students about students' progress in school, usually by signaling students' relative position compared to other students (Davis, 2019). Summative assessment may be properly used for serving the functions such as certification, grading or promotion. In this way, it provides information on the quality of students' performance. Assessment data may also provide unique information to the parents about the progress of their children as well as necessary information to the school administrators and educational authorities (Mangal and Mangal, 2019). Summative

assessment is designed to measure what learners have learned at the end of course or program of instruction (Genesee and Upshur, 1996). According to Earl (2013, p. 29), it is typically done at the end of something (e.g., a unit, a course, a program) and takes the form of tests and exams that include questions drawn from the material studied during that time. In assessment of learning, the results are expressed symbolically, generally as marks or letter grades, and summarized as averages of numbers of marks across several content areas to report to parents. According to the same source, this is the kind of assessment that still dominates most classroom assessment activities, with teachers firmly in charge of both creating and marking the tests. Teachers use the tests to assess the quantity and accuracy of student work, and the bulk of teacher effort in assessment is taken up in marking and grading. A strong emphasis is placed on comparing students, and feedback to students comes in the form of marks or grades, with little direction or advice for improvement. According to Mangal and Mangal (2019), these kinds of testing events indicate which students are doing well and which ones are doing poorly. So, summative tests are designed to "measure the pupils' achievement on a completed course of studies" (Sárosdy et al, 2006, p.137). However, Brown defines this type of tests as "tests that are limited to a particular material covered in a curriculum within a particular time" (1994, p. 259). The decision under- taken is whether learners can pass to a higher level or achieve a certain certification or not. summative tests can be internal, constructed by the teacher or the school such as the end of term tests or external, administrated by the Ministry of Education. The purposes of this type of tests is to measure individual progress and teaching success (Verghese, 1989).

However, formative assessment assesses learners during the process of forming their knowledge for the purpose of guiding them through providing information about their progress (Benjamin, 2008). According to Allal and Lopez (2005), the notion of 'formative evaluation' was introduced in Scriven's work (1967) on the evaluation of educational programmes. Its aim was to provide data that assist in adapting new programmes successfully during the phases of its development and implementation. However, it is worth to mention that the term "assessment" having progressively replaced "evaluation" when the object is student learning in the classroom. Bloom (1968) quickly took up the idea of formative evaluation and applied it to student learning. According to Grant, et al (2021), Bloom (1971) links the idea of formative evaluation to the instructional approach of mastery learning. Bloom points out that the purpose of this assessment is not to grade or punish the learner, but to help the learner and the teacher to move toward mastery. This goes through a formative

process as proposed by (Bloom, 1968; Bloom et al, 1971) and in which an instructional unit is divided into several successive phases. First of all, teaching/learning activities are undertaken in relation with the objectives of the unit. Once these activities have been completed, a formative assessment, usually a paper-pencil test, is proposed to the students. The results of the test provide feedback to the teacher and students and are used to define appropriate corrective measures for students who have not yet mastered the instructional objectives (Allal and Lopez, 2005, P. 4). In this way, Formative function remains the remediation of learning difficulties identified by formative assessment toward mastery learning. *Formative assessment* assesses learners during the process of *forming* their knowledge for the purpose of guiding them through providing information about their progress (Benjamin, 2008). It can be defined as the process used by teachers and students to recognize and respond to students learning in order to enhance that learning, during the learning (Cowie and Bell, 1996 as cited in Bell et al, 2001, p. 77).

In this way, assessment purpose is to give learners opportunities to check what progress they are making and provide them with information about their weaknesses and difficulties as well as success of teaching and learning. More broadly, formative function can be to provide information about the learning objectives, the course materials and contents as well as difficulties and setting future decisions concerning these difficulties (Allal and Lopez, 2005). So, "assessment is formative in its function only when the action that is taken, is intended to improve student learning" (Black and Wiliam, 1998, p. 53, as cited in Bell et al, 2001, p. 77). Hence, diagnostic assessment is viewed as a part of formative assessment.

1.3.3.   Diagnostic Function

In diagnostic assessment as an assessment for learning, teachers use assessment as an investigable tool to find out as much as they can about what their students know and can do, and what confusions, preconceptions, or gaps they might have (Maheshwari, 2016). Diagnostic assessments generally serve three distinct purposes according to Saubern, (2010): to understand the current situation, to garner knowledge about how to improve, and to determine required resources (as cited in Broemmel et al, 2015). More broadly, assessment can be found to serve the following important diagnostic functions: the main function or use of diagnostic test is to diagnose the learning difficulties or weaknesses of an individual learner or a group of learners in particular learning area as well as the identification of some specific groups of learners with special needs such as slow learners. Most of time diagnostic tests are

designed to identify areas of weaknesses and learning difficulties. However, they can be a good means to identify the good learners who academically do well and accordingly they receive development programmes suitable for their levels and interests. Assessment can provide a deeper sight about the learning difficulties and weaknesses of each learner, more precisely, about the nature, extent and the probable reasons for such leaning difficulties. The results of diagnostic tests together with error analysis can be successfully used in planning the suitable remedial teaching. Furthermore, Assessment data may provide a good feedback to the students by constantly informing them about their strengths and weaknesses and to the teachers in terms of the functioning and effectiveness of their models and strategies of teaching (Mangal and Mangal, 2019). In brief, they claim that:

Evaluation or assessment data may also help in the diagnosis of learning difficulties of the students in various scholastic and non-scholastic areas. Based on such diagnosis, suitable steps can be taken for:

1) the organization of guidance and counselling programs to the needy students.

2) the organization of specific or remedial education to the needy children in relation to their learning difficulties"

(Mangal and Mangal, 2019, p11).

Thus, assessment in its diagnostic function aims to *"identify pupils' language problems, weaknesses or deficiencies ...in order to plan future teaching priorities"* (Sárosdy et al, 2006, p. 138). It enables learners to be aware of their weaknesses and problematic areas. Based on the data obtained concerning learners' language abilities, teachers can take appropriate decisions concerning future teaching and remedial work (Gronlund, 2006, as cited in Lee et al, 2008). Thus, diagnostic assessment is viewed as a part of formative assessment (Black, 1993, as cited in Bell et al, 2001, p. 77).

Diagnostic, formative and summative assessments involve the use of a wide range of methods by which the learning-teaching process can be evaluated at different times of instruction. However, educational diagnostic assessment as one of the most useful assessments is an initial and basic element to make the teaching and learning more effective. It has long been recognized as a useful means to improve the quality of teaching and learning.

1.4.   Educational Diagnosis

Educational diagnosis is known as the process of determining the causes of educational difficulties. These difficulties may be rooted to cognitive, emotional, health or social factors.

Educational assessments are used as an investigable tool to find out as much as they can about what learners know and can do either for diagnostic purposes or to serve other several purposes. What's being dealt with in diagnostic assessment historical background is the use of several tests for diagnostic purposes even if they were not claimed as diagnostic tests

1.4.1. Diagnostic Assessment Historical Background

The term "diagnosis" refers back to the Greek word "diagignoskein" that means "to discern, distinguish" (From Wikipedia, the free encyclopedia). The term was widely used in the field of medicine. It is related to the identification of the nature and cause of an illness or any problem in health. The doctor examines the patient through having information about the symptoms occurred or felt by him. The doctor's work here is to find out the true cause of the symptoms because most of them are similar and confusing, and then treat it through drugs or other medical alternatives. For solving problems in any area, diagnosis is the first and the most essential step. In the same vein Alderson (2015) states that, in spite of the fact that diagnosis is associated with medicine, it is used in many fields to identify the cause and effect relationships, and the solution to problems (Alderson et al, 2015, P. 1).

Concerning educational diagnosis, Bejar (1984) distinguished between the medical approach and the educational approach to diagnosis. He argued that in medicine patients are assigned to a disease category based on a pattern of indicators and the occurrence of several symptoms, however educational diagnosis focuses on learners' weaknesses or on the types of errors the learners make, and this which represents either the deficit approach or the error analysis approach respectively (Bejar, 1984, as cited in Alderson et al, 2015, P. 37).

Reflection on educational diagnosis was originally associated with other examinations for diagnostic purposes, which were mainly in the mother tongue and mainly they were "diagnostic tests of reading and learning difficulties in one's first language" (Alderson, 2005, p. 13). A review of literature in general education reveals that diagnostic testing has traditionally concentrated on the diagnosis of speech and language disorders (Nation and Aram;1984), the detection of difficulties in reading and arithmetic (Clay, 1979; Bannatyne, 1971; Schonell and Schimel, 1960) and the diagnostic of learning difficulties (Bannatyne, 1971; Wilson, 1971) (as cited in Alderson, 2005, p. 13).

According to Fernandez (2011) reflection on educational diagnosis interested in the analysis of individual differences, mainly with the selection and classification of students, their skills, abilities and interests. According to Fernandez (2011), reflection on educational

diagnosis origins date back to the time of Francis Galton (1822-1911), Alfred Binet (1857-1911) and James McKeenCattell (1860-1944) and among them, the most significant results on the diagnosis belong to Alfred Binet. The psychologist Alfred Binet was asked by the French Ministry of Education to devise a method that would determine which students did not learn effectively from regular classroom instruction so they could be given remedial work. Along with his collaborator Theodore Simon, Binet invented the first practical intelligent quotient IQ test, the Binet–Simon test. In 1905. He published revisions of his test in 1908 and 1911, the last of which appeared just before his death (From Wikipedia, the Free Encyclopedia). The main purpose of this first intelligent quotient (IQ) test was to identify students who were most likely to experience difficulty in school. and would need more specialized educational assistance (Cherry, 2020).

According to Cherry (2020), the Binet-Simon Scale generated considerable interest in United States. Stanford University psychologist Lewis Terman took Binet's original test and standardized it in American case. This adapted test, first published in 1916, was called the Stanford-Binet Intelligence Scale and soon became the standard intelligence test used in the U.S. To determine which men were well-suited to specific positions and leadership roles in the Army, two tests known as the Army Alpha and Beta tests were developed. At the end of WWI, the tests remained in use in a wide variety of situations outside of the military

According to Fernandez (2011) and since the year 1920, several types of tests emerged like Alpha and OTIS which focus their attention on knowledge and not on the detection of innate intellectual. In the years 1950-1960, scientists began to be a little more aware of the need to analyze also skills. An author who stayed close of Binet's approach was Wechsler (Fernandez, 2011). Building on the Stanford-Binet test, American psychologist David Wechsler developed different tests, one of them for use with children. Today, they remain the ones of the tests used to make a diagnosis, at school and in the clinical environment.

In the years 1950-1960, there were a number of important contributions in terms of improving the quality of diagnostic tests. The Piaget's theory is one of those examples since he focused on intellectual mechanisms rather than outcomes, structure rather than content (Fernandez, 2011). Piaget worked as an assistant with the designers of the Binet-Simon IQ test at the beginning of his research career. In terms of the intelligence tests, instead of focusing on the wrong answers students were getting, Piaget found it more important to look at the answers in general (From Funderstanding Article, 2011). Piaget felt that by looking at the answers themselves (rather than their correctness), he could see how the children were thinking. He noted that many children were giving the same incorrect answers this important

pedagogical fact was not even noticed by the Simon team because they looked only at the numbers of correct answers. He studied these wrong answers and learned that although children were giving incorrect answers, they were reasoning in ways similar to each other. Piaget recognized that teaching needed to focus on how children were reasoning rather than focusing on how well they might recall facts for a test (From Engines for Education, Piaget and Intelligence Tests).

According to Fernandez (2011), since the 1970s and the early 1980s, some researchers have been criticizing models of psychometric and clinical diagnostics offered by Piaget because of a number of difficulties, and this led to the appearance of new research perspectives. The work of the Russian scientist Lev Vygotsky is of great importance. It has been closely associated with education issues and his works are very important in educational diagnosis (Fernandez, 2011). Vygotsky could found a significant and detailed theory about the natural and historical-cultural development of the individual. The first concept that became familiar to the West was Vygotsky's concept of Zone of Proximal Development which began to re-shape general teaching practice throughout the world (Svetlana Masgutova Educational Institute). This concept is defined as "the distance between the current actual development level (ZDR) and the level of potential development (ZPD), determined by problem solving with the guide or the collaboration of more competent adult partners" (Vygotsky cited in Becco, 2001, p. 3, as cited in Fernandez, 2011). In developing ZPD, Vygotsky was concerned that "research on the problem of instruction is usually limited to establishing the level of a child's mental development. The sole basis for determining this level of development are tasks that the child solves independently. This means we focus only on what the child has already mastered and knows today." (Vygotsky, as cited in McLeod, 2007). Therefore, the ZPD is crucial for identifying each child's readiness to benefit from instruction (McLeod, 2007).

References on second language or foreign language diagnosis was originally associated with other tests for diagnostic purposes, which were mainly along with proficiency testing. According to (Sànchez, 2001), they dated back to English exams set by the university of Cambridge in 1898 in 36 colonial centres. However, "the early tests indicated general proficiency levels while later ones were more diagnostic, indicating areas of weakness" (Sànchez, 2001, P. 174). From 1963 to 1965 significant researches into the language difficulties of overseas students were made by Alan Davies at Birmingham university for the purpose of developing a standardized test of English proficiency which was later known as the English Proficiency Test Battery (EPTB) or (Davies Test). At the same period, some tests

of English proficiency were being developed at different universities. At Edinburgh university, the English Language Battery (ELBA) was designed to test reading, listening, vocabulary and grammar to see in which areas students might need help. From 1967 to 1970 at Manchester university, Frank Chaplen devised a multiple-choice speeded grammar and vocabulary test to identify overseas students who were likely to underachieve in university courses because of their low level in English. Later on, this test was tried out at other universities and certainly helped to a great extent to determine those students who needed remedial language assistance. Perhaps, the most famous test is the Test of English as a Foreign Language (TOEFL), and which was regularly used since 1965. The main English tests were used for two main purposes; either for admission usually for undergraduates or to get information about areas that needed remedial help usually for postgraduates (Sànchez, 2001, PP. 174-175).

But, as a separate and standalone frame of assessment, "diagnostic testing is virtually ignored in the literature, and is rarely, if ever, problematized." (Alderson, 2005, p. 13). It is rarely existed just very few tests were available that were labeled 'diagnostic' (Alderson et al, 2015, p. 1). Among them, there was Tim Johns test. In the following step, we attempt to deal with the factors behind the scarcity and brevity of its treatment.

1.4.2. Scarcity and Brevity of Treatment of Diagnostic Language Testing

As it has been mentioned above, diagnostic testing in the second or foreign language education is rarely mentioned in the literature on language assessment. Alderson et al (2015) claim that curiously, there is very little discussion of diagnosis, of what it is, who does it, how it is done, and with what results. Until recently, there was virtually no research into how, what and why SFL teachers diagnosed their learners' problems, the 'nature and cause' of their strengths and weaknesses (Alderson et al, 2015, p. 1). However, obviously, there are many references to diagnostic testing, along with proficiency, achievement, aptitude, and placement testing, but, until recently, as a separate and standalone frame of assessment, it is rarely existed just very few tests were available that were labeled 'diagnostic'(Alderson et al, 2015, p. 1). The term diagnosis has been mentioned as one of the types of testing according to purposes. However, diagnostic tests "in one's first language are reasonably well established, with quite a long history, and are widely used, at least in north America and western Europe" (Alderson, 2005, p. 13).

Interestingly, there are few more recent books or indeed articles available on diagnostic testing outside the context of clinical speech and language pathology and diagnosis, and in foreign language testing specifically, there are no books on educational diagnostic language testing, very few articles, and the topic receives only cursory treatment even in textbooks on language testing (Alderson, 2005, p. 13). Moreover, the most remarkable thing about diagnostic testing within second or foreign language testing is the lack of frame on how diagnostic tests should be constructed and validated. (Alderson, 2005).

As it has been indicated earlier, the most notable thing about diagnostic testing within second or foreign language testing is the scarcity and brevity of its treatment in the literature. This is due to certain possible factors. According to Bachman & Purpura (2008), one possible factor is the existence of a large and powerful examinations and testing industry, mainly in second or foreign language education, which has concentrated on developing proficiency tests required in a variety of gate-keeping functions (as cited in Alderson et al, 2015, p. 2). Language proficiency tests have been given such great importance and attention as they are widely used to determine the sufficient language proficiency necessary in different domains; such as studying in higher education, entering in many professions, into business and commerce, as a key element to admit immigrants, and so on. As extremely powerful tools with very high stakes and consequences, they have generated a lucrative test-preparation industry around the world. Consequently, other forms of testing have received much less importance (Alderson et al, 2015, p.2). It is the case with diagnostic testing within this industry, which rarely exist, and another possible reason of its scarcity is the little importance given to teaching diagnostic language testing to language teachers in their pre-service courses and even in -service professional development courses (Alderson et al, 2015, p. 2). Language teachers are rarely taught how to design diagnostic tests and how to interpret the results obtained from these test before or even during their profession. Recently, Alderson et al, (2015) argue that diagnostic tests need to be conceptualized and operationalized from the onset, "as diagnostic tests", rather than "diagnostic information" taken from tests that were originally designed for other purposes like achievement, placement, or proficiency tests. They discuss in some detail the notion of diagnosis and the research and theory associated with second and foreign language proficiency.

In spite of the fact that there was a great confusion about the exact definition of diagnostic tests and what it can include, we attempted to deal with these issues.

1.4.3. Diagnostic Assessment Definition

Educational diagnosis is known as the process of determining the causes of educational difficulties. It is broader than the use of tests and examinations. Rather, it may involve the use of class observation, questionnaires, interviews or any form of surveys (Kumar, 2012). Educational diagnosis doesn't search just for the areas of weaknesses, rather its main purpose is to identify the possible factors leading to such difficulties including cognitive, emotional, health, social and other factors.

Educational diagnostic assessment, known as pre-assessment, predictive assessment, or diagnostic pretest, is very essential for teaching and learning. It has long been recognized as a useful means to improve the quality of teaching and learning since it can "provide detailed picture of student performance in a specific domain area" (Paratore and McCormack, 2007, p. 91). However, the data obtained from this detailed picture can be used to make judgments and practical measures about student learning. It is usually done before the beginning of the teaching learning process to identify the level of students and their needs in a particular area to be taken into account in the planning of the subsequent lessons. Hence, "teachers should first diagnose the needs and the differences of each student in the classroom" (Akdeniz, 2016, p.49).

The term diagnostic assessment is defined as "a form of pre-assessment that allows a teacher to determine students' individual strengths, weaknesses, knowledge, and skills prior to instruction. It is primarily used to diagnose student difficulties and to guide lesson and curriculum planning" (Manglik, 2020, P. 254*)*. Alami, (2015) defines it as a "strategy which comprises the systematic gathering of information about students' attainment, so that students' strengths and weaknesses are identified and used as a foundation for classroom activities" (Alami, 2015, p.5). It is administered at the start of the year, term or course; which means that it occurs before instruction begins. The purpose of such assessment is to determine what learners already know about the areas to be covered by instruction and to help teachers and learners identify problems that they have with the language and decide what areas of language need to be dealt with first in the syllabus. In the same vein, Akdeniz (2016) states that "the diagnostic assessments continue throughout the learning process whenever the teacher needs to identify an attribute or pre-requisite learning for a new content" (Akdeniz, 2016, p.49). It can be formal such as tests and examinations as well as informal when conducted through the use of different methods, techniques and tools, such as

observation, student portfolios, questionnaires, question-answer, attitude scales, interviews, etc (Akdeniz, 2016. P.49). However, the most effective tool can be tests.

A diagnostic test stands for a type of test administered to a student or group of students for knowing about the nature and extent of learning difficulties, weaknesses or problems faced by them in a particular learning area, subject, topic or concept (Mangal and Mangal, 2019, P. 119). A diagnostic test is not just used to identify test taker's weaknesses but also strengths "by testing what they know or do not know in a language, or what skills they have or do not have" (Davies et al, 1999, p. 43). Alderson (2005) claims that diagnostic tests have a significant educational value and are worth constructing in spite of the high cost involved. This is because it is difficult and time - consuming to construct such tests (Davies et al., 1999).

For the possibility of distinguishing diagnostic tests from other types of tests even if they are used for diagnostic purposes, Alderson (2005) lists a set of hypothetical features of diagnostic tests, which include the following:

1. Diagnostic tests are designed to identify strengths and weaknesses in a learner's knowledge and use of knowledge.
2. Diagnostic tests are more likely to focus on weaknesses than on strengths.
3. Diagnostic tests should lead to remediation in further instruction.
4. Diagnostic tests should enable a detailed analysis and report on responses to items and tasks.
5. Diagnostic tests thus give detailed feedback which can be acted upon.
6. Diagnostic tests provide immediate results, or results as little delayed as possible after test taking.
7. Diagnostic tests are typically low-stakes or no-stakes
8. Because diagnostic tests are not high-stakes they can be expected to involve little anxiety or other affective barriers to optimum performance.
9. Diagnostic tests are based on content which can be covered in instruction, or which will be covered shortly.
10. Diagnostic tests are based on some theory of language development, preferably a detailed theory rather than a global theory.
11. Thus, diagnostic tests need to be informed by second language acquisition research, or more broadly by applied linguistic theory as well as research.

12. Diagnostic tests are likely to be less 'authentic' than proficiency or other types of tests.

13. Diagnostic tests are more likely to be discrete-point than integrative, or more focused on specific elements than on global abilities.

14. Diagnostic tests are more likely to focus on language than on language skills

15. Diagnostic tests are more likely to focus on 'low-level' language skills (like phoneme discrimination in listening tests) than on higher-order skills, which are more integrated.

16. Diagnostic tests of vocabulary knowledge and use are less likely to be useful than diagnostic tests of grammatical knowledge and the ability to use that knowledge in context.

17. Tests of grammatical knowledge and use are difficult to construct because of the need to cover a range of contexts and to meet the demands of reliability.

18. Diagnostic tests of language skills like speaking, listening, reading and writing are (said to be) easier to construct than tests of language knowledge and use. Therefore, the results of such tests may be interpretable for remediation or instruction.

19. Diagnostic testing is likely to be enriched by being computer-based

(Alderson et al, 2015, pp. 44-45)

The diagnostic assessment in the educational classroom can also focus on students' motivations, interests and learning preferences. In the same vein, Wiggins and McTighe (2007) assert that pre-assessments "include checks of prior knowledge and skill levels and surveys of interests or learning –style preferences" (p.101) (as cited in Saeed et al, 2018, P. 118). It can also be used to determine whether a particular curriculum or the teaching practices and classroom techniques of individual teachers are effective or not. In general, diagnostic assessments can concentrate on all that can be useful in planning the next instruction and improving learning.

Depending on all that has been said above, diagnostic assessment has a significant educational value and it is a necessary step for the success of the teaching-learning process to achieve the purposes it is intended for. The usefulness of diagnostic evaluation manifests in many aspects.

1.4.4. The Importance of Educational Diagnostic Assessment

Educational diagnostic assessment has many advantages and benefits for both the instructor and the students. Educational diagnosis is the basis of effective and intelligent teaching. Its major function is to facilitate the optimum development of every student (Kumar, 2012, p. 10). It has a noble purpose which is to assess each learner's knowledge and capabilities to determine what they may need to succeed. Since diagnostic tests are used to determine what a student knows about the skills and concepts that will be covered along the new year, they help the teacher to prepare meaningful and efficient lesson plans, teaching strategies and other classroom techniques on the basis of the learners' specific strengths and weaknesses. The detailed and well-designed test can also show what learning styles the learner uses in order to get the best results and drive the student's academic progress. Moreover, diagnostic tests can show what will be on the summative tests and according to their performance they can have an idea about how well they will do on achievement tests. A very essential benefit is that pre-assessment tests can save time in teaching. If the learner seems to master certain instruction in the assessed area when entering a new year, the teacher can focus on what they do not know rather than what they already know. And that leads to cut down boredom in them. Moreover, diagnostic tests provide information to individualized instruction. The teacher can set remediation for a group of students who face the same difficulties through developing some teaching materials and teaching part-time. However, for those who do well in the diagnostic test, the teacher can design activities based on their level.

Mohan (2016) states that diagnostic testing is beneficial for both the students and teachers. Benefits for students include the following:

- Focuses students towards right career choices.
- Enhances teacher pupil interaction to attain learning goals.
- Facilitates timely action by giving feedback at regular intervals.
- Promotes self-learning.
- Helps students in setting realistic goals.

Benefits for the teachers include the following:

- Understand the strengths and needs of each student.
- Provides tools needed to group students for different mini-lessons throughout the school year depending on their needs and goals set for learning.

(Mohan, 2016, P. 166)

The major aim of diagnostic tests is to identify specific areas of weaknesses and the exact nature of such weaknesses along with the possible reasons. And this can only be confirmed through especially well-prepared diagnostic tests. So, how should a diagnostic test be constructed so as to achieve its intended objectives?

1.4.5. Construction of Diagnostic Tests

Teachers in constructing effective diagnostic grammar test go through a systematic diagnosis process. The preparation of a well-constructed diagnostic test in general may involve three main steps;

2.   planning for the construction of the diagnostic test.

3.   Construction of the diagnostic test.

4.   Administration and interpretation of the diagnostic test.

<div align="right">(Mangal and Mangal, 2019, p. 112).</div>

1.4.5.1. Planning for the Construction of the Diagnostic Test.

Undoubtedly, in engaging in any action planning is the first most important step. A well- thoughtful and thorough planning is of a vital importance for the construction of a diagnostic test. Mangal and Mangal, (2019) set some stages in this phase. According to them, the first most important stage is identifying the areas of weakness or learning difficulties that lead to the need of constructing a diagnostic test. These can be based on the teacher's observation of his learners in classroom drill or practice work, homework and assignments as well as the results of achievement or progress tests. Information obtained from the performance of learners or just one learner during such evaluation may be an evidence of some weaknesses and learning difficulties. The second most essential step may be isolating a unit, sub-unit or concept for diagnosing in depth. It is inadvisable to take all units or even a full unit for the construction of diagnostic test. In this way, diagnostic tests should be constructed based on single concepts which should be then joined and combined to identify the learning difficulties and weaknesses. The third condition to construct a diagnostic test is content analysis of the sub-unit or the single concept. This content should be analyzed to determine the pre-requisite knowledge, skills and behavior required for the learning of a single concept or a particular sub-unit as well as the expected behavior after learning that contents. The next most important step is deciding about the nature and numbers of items that really reflect the intended abilities to be measured. The test should be as exhaustive, detailed

and lengthy as possible. The items should include short answer type questions, preferably, completion type items. The last step is taking decision about necessary administrative measures such as the time limit, scoring, results interpretation etc. (Mangal and Mangal, 2019, p. 112).

1.4.5.2. Construction of the Diagnostic Test

According to Mangal, and Mangal (2019, p. 112), the major important step in the construction of the diagnostic test is the selection of the appropriate items. this selection is mainly focused on three main aspects:

1. The nature of the contents of the sub-unit or single concept.
2. The pre-requisite behavior in terms of the previous knowledge, skills needed for learning the sub-unit or concept.
3. The expected behavior, i.e., knowledge, skills etc. acquired by the learners after studying such contents

Moreover, a scoring key and model answers should be made along with the writing of the items for the diagnostic test for helping in its proper and exact interpretation.

1.4.5.3. Administration and Interpretation of the Diagnostic Test.

This stage involves two steps; the administration of the diagnostic test to the learners and the interpretation of their responses. The constructed diagnostic test should be administered to the whole class or individual student for the purpose of knowing the weaknesses and learning difficulties related to the sub-unit or the single concept. What is intended to be measured should be clearly identified to the learners. After answering the questions, the responses should be collected and scored on the basis of the scoring key and model answers prepared in advance. All this is as preparation for the analysis and interpretation of the test results. A wise step in knowing in depth the nature of weaknesses and learning difficulties of students, many prefer carrying out error analysis of the responses given by students or an individual student. The term error analysis stands for the analysis of the errors made by the learners in providing responses to the items of the administered diagnostic test. These errors form a proper diagnosis of their weaknesses and learning difficulties which lead to reach to most convincing reasons that lead to committing such errors. Error analysis and interpretation of the students' errors help teachers to think and set a suitable remedial

programme and measures for the purpose of helping them to overcome such learning difficulties and weaknesses and get rid of them (Mangal and Mangal, 2019, P. 112).

A well-designed test should achieve its intended purposes. Diagnostic testing is designed to locate specific learning difficulties so that specific measures could be taken and applied to overcome those deficiencies. And as grammar is viewed as a basic component of learning any language, it has always been one of the most important testing areas to evaluate the learner's language abilities.

1.5.   Grammar Diagnosis

Grammar teaching and testing have been one of the most controversial aspects of language teaching and testing for a long time. It has been always given a considerable position in language teaching as well as testing the learner's language abilities (Purpura, 2004). The teachers' role is to help their learners appreciate and use grammar accurately and appropriately since grammar is the core constituent of learning any language. The chief goal of grammar instruction is to get learners have a positive attitude toward its learning and to support their grammar competence growth. Before dealing with grammar diagnosis literature, it is appropriate to deal with grammar testing in general starting with a brief overview of what grammar is and the common approaches to teach it.

1.5.1.   An Overview of Grammar Testing

The study of grammar is viewed as a basic component of learning a foreign language. For centuries, to learn another language, or what is generically known as second language, meant to know the grammatical structures of that language and to cite prescriptions for its use (Purpura, 2004. P. 1). Learning grammar is very important in language acquisition for many reasons. According to Larsen-Freeman (2009, p.518), grammar learning promotes accuracy. Learners who have good grammatical competence have the ability to produce accurate written or oral language. The second reason is that grammar is important for noticing and consciousness-raising in communicative language classroom (Larsen-Freeman,2009, p.527). Through a good command of grammar, EFL learners can be aware of the structures they are using to communicate. Concerning the receptive skills, EFL learners who have adequate grammatical knowledge can be able to understand the meanings of sentences from simple to complex and thereby understanding both written and spoken texts. Hence, mastering key

grammatical concepts helps L2 learners to achieve both accuracy and proficiency in that language.

Grammatical knowledge has always been considered as a core constituent for the development of a second or foreign language proficiency. What has been changed over time is how grammatical knowledge has been defined. Before dealing with assessing grammar, it is appropriate to give a brief overview of what grammar is and the common approaches to teach it.

1.5.1.1. Grammar Definition

Grammar is defined as the description of the rules that determine how sentences are formed. These rules cover both the formation of words and the order of words in a sentence (Thornbury, 1999). That means morphology and syntax respectively. Morphology involves both derivation and inflection. Thornbury adds that learners do not need only to learn the correct forms in a language, rather they need to learn what particular meanings these forms express. Therefore, grammar is a means to make meanings. To learn a second language, learners should improve *"the ability both to recognize and produce well-formed sentences"* (Thornbury, 1999, p. 3). However, these sentences should convey meanings. In this vein, Long and Doughty state that *"grammar is a system of meaningful structures and patterns that are governed by particular pragmatic constraints"* (2011, p. 521). Thus, grammar is considered as form, meaning and use.

1.5.1.2. Grammar Teaching Approaches

The search for successful teaching strategies have been always the concern of many debates. Grammar as an essential component in any language has been given much importance for the purpose of finding out effective methods to achieve grammatical proficiency. Concerning approaches to teach grammar, there are the deductive approach and inductive approach. According to Harmer (2007, 81), in deductive approach grammar rules are presented and explained. Then, learners are engaged in practice tasks on the basis of these explanations and rules. It is known as explain and practice approach. However, in inductive approach pupils work out the rules through studying examples of language. They are also known as rule- driven and rule- discovery approaches respectively (Thornbury, 1999, p. 29).

A further distinction should be made between explicit grammar teaching and implicit grammar teaching. The approaches of teaching grammar differ also in terms of the views of grammar and the status given to it within language teaching. In the former, grammar courses

are explicitly presented to learners either deductively or inductively. However, in the latter, learners are involved in tasks without overt reference to grammar rules or forms (Cowan, 2008). In the same vein, Larsen-Freeman (2009) claims that *"Explicit instruction is where pupils are instructed in the rules or patterns (deductive) or guided to induce them, themselves (inductive). An implicit approach makes no reference to rules or patterns"* (Larsen-Freeman, 2009, p. 527). However, many current educational research and practice emphasize the importance of providing EFL learners with explicit instruction in the rules and forms of English grammar to achieve academic language proficiency (Stathis and Gotsch, 2013). This is also confirmed by Cowan (2008) when he claimed that many studies have shown that *"explicit teaching produces better and longer-lasting learning than implicit teaching"* (Cowan, 2008, p. 31). A research conducted by Norris and Ortega (2000) focused on various studies was done for the purpose of determining whether grammar teaching is effective or not. These research findings argue that explicit grammar instruction is more beneficial than implicit teaching (as cited in Larsen-Freeman, 2009). Moreover, they emphasize the focus on forms and forms in meanings too. Furthermore, many studies have shown that *"explicit teaching produces better and longer-lasting learning than implicit teaching"* (Cowan, 2008, p. 31).

Explicitly or implicitly, grammar teaching has been remained one of the most debatable concerns of English language teachers. However, choosing a particular approach to grammar teaching is another controversial issue. In following the principles of a particular method, teachers may face various teaching constraints. Thus, eclecticism that is *"choosing between the best elements of a number of different ideas and methods"* seems to be the best choice (Harmer, 2007). Therefore, adapting an eclectic approach in which teachers take what suits and benefits their learners and reject what causes difficulties, has been proved to be beneficial. Using of teaching methods differs according to different situations. In this way, teachers need to make a balance between introducing structures deductively and inductively. Moreover, eclecticism in teaching grammar enables teachers to develop pupils' grammar competence as well as the ability to use it appropriately.

There are different models of teaching a grammar lesson such as PPP (Presentation, Practice, Production), TTT (Test, Teach, Test) and ESA (Engage, Study, Activate) (Cotter, 2010). However, the most utilized one seems to be PPP model, *"Grammar lessons are usually composed of three phases: Presentation, Practice, and Production"* (Shojaee, 2014). Larsen-Freeman (2009) notes that "countless generations of pupils have been taught grammar

in this way- and many have succeeded with this form of instruction" (2009, p. 523). In the presentation phase, the teacher presents the new grammatical point in a meaningful context that should be attractive and motivating. The teacher should make his pupils aware of the need of the grammatical structure. At this stage, it is essential to choose which approach is appropriate for the situation, either the deductive or the inductive approach to teaching grammar. Ur (1996) notes that the choice between these two ways depends on many things. The former is more suitable with lower level pupils and it saves time and allows more time for practising the language items. However, the latter is often more beneficial to pupils with an acceptable level in the language since it encourages them to discover structures by themselves based on their background knowledge. In the practice phase, pupils need to practice the new structure so that they master it. In the last one; that is production stage, learners need time to use the new structure in their own oral or written language. However, Harmer (2007) suggests ESA model which he considers as elements for successful language learning. In this model, pupils are engaged through using certain activities such as games, music, stimulating pictures, discussions, etc. Their involvement in the study activities makes them concentrate on the construction of particular elements of grammar. In activate activities, pupils are asked to use all and any language that may be appropriate for the situation as freely and communicatively as they can.

In favour of one method to another, grammar must be part of any language instruction. More importantly, grammar teaching should lead to better language knowledge and use in context that help in the communication of meanings.

1.5.1.3. Grammar Testing Approaches

Along the history of foreign language teaching, different approaches bearing different theories concerning language teaching and learning appeared. These theories and approaches influenced approaches of language testing since language teaching and testing are strongly interrelated (Vyas and Patel, 2009). Since grammar has been considered as the core constituent of language, it has been always given a considerable position in language teaching as well as testing the learner's language abilities (Purpura, 2004). The approaches of teaching grammar differ in terms of the views of grammar and the status given to it within language teaching. These theories in their turn influenced the approaches of grammar testing as language teaching and testing are two closely interconnected concepts. Testing grammar depends on the construct of grammar that is wanted to be tested; either language knowledge

or language performance, either learner's abilities to handle discrete language elements, integrative language skills or performance language skills (Rafajlovi and Ová, 2009).

Grammar testing differs in terms of the method in which tests are designed and the content to be assessed, whether it is a knowledge, skill or performance. It also differs in terms of the purposes it is intended for. Indeed, what passes as language testing in general passes as grammar testing (Thornbury, 1999). It also differs depending on the definition given to grammar. Larsen-Freeman (2001) has referred the definition of grammar to three dimensions that take into account both traditional and newer approaches, which is form, meaning and use.

According to Larsen-Freeman (2009), in using the traditional approach to grammar testing grammar tests are designed to test the learner's grammatical knowledge in terms of accurate comprehension and production, typically through using decontextualized tasks. It is usually done through using decontextualized, discrete- point items. *"Discrete means single and separate"* (Sárosdy et al, 2006, p. 140). In this approach to grammar testing, objective test items which require predetermined answers are used to measure the learners' awareness of the grammatical features of the language. Each item tests one different grammatical element, rule or structure of the language (Sárosdy et al, 2006). Discrete- point items can be multiple- choice tasks, gap-filling, sentence combining and error correction.

Grammar is also assessed in integrative manner through the accurate comprehension and production through the four skills (Larsen-Freeman, 2009). In this type of testing, the examinees need to combine many elements of the language and use language skills to perform the task. These skills are not just grammatical but they may be lexical, contextual, semantic, cohesive and predictive (Sárosdy et al, 2006). One of the most common items of this type is cloze procedure in which the test taker needs to use a variety of techniques to restore the missing parts (Sárosdy et al, 2006). Dictation and translation are also two frequent items of this type which involve integrative skills; listening, reading and writing.

However, such approaches to grammar testing test the ability to either recognize or produce correct grammar and usage, they do not test the ability to use the language (Kitao and kitao, 1996). In other words, these ways of testing do not provide information about the test takers' ability to convey meanings and to use grammar correctly in real life situations of speaking and writing. Thus, the occurrence of the new trends in grammar testing is based on the shift of seeing language proficiency from terms of structures knowledge tested using discrete-point items to terms of ability to use grammar knowledge in performance which can

be tested through writing texts or face-to-face interaction (McNmara and Roever, 2006, as cited in Larsen-Freeman, 2009).

Depending on the definition given to grammar and which is based on three dimensions that take into account both traditional and newer approaches, and which are form, meaning and use, grammar testing can be an assessment of grammatical forms, of semantic meanings or of pragmatic meanings (Purpura, 2014). According to (Purpura, 2014), *assessing grammatical forms* through *form-based tests* is designed to target specific grammar points, assess a wide range of forms, or assess a student's receptive knowledge. It has been used in all educational contexts. *Assessing semantic meanings* involves assessing the learner's ability to covey meanings precisely and appropriately; that means grammatical knowledge at the sentence and discourse or textual levels. *Assessing pragmatic meanings* using *task-based tests* is used to test the learner's ability to use his grammatical knowledge to perform realistic tasks based on pragmatic meanings.

To conclude, traditional and recent approaches to grammar assessment represent different theories about grammar and grammar testing and each have a contribution to make (Larsen-Freeman, 2009). However, Purpura (2004) claims that many of the grammar tests that are currently in use reflect the perspectives of structural linguistics and discrete- point measurement. Therefore, a basic knowledge of grammar underlies the ability to use language to express meaning.

The overall purpose of grammar testing is to provide information about the learners' grammar knowledge and their ability to use this knowledge meaningfully and appropriately, either before, during or at the end of an instruction program. That is to say, diagnostic, formative or summative purposes. However, diagnosis in grammar testing is rarely mentioned just some sporadic indications in the literature of proficiency tests that claim to be diagnostic.

1.5.2. Early Treatments of Grammar Diagnosis in Language Testing

It seems that Birmingham university was the first British university that paid attention to the needs and difficulties of overseas students in language. In 1962, Vera Adamson tried to devise an appropriate English test to identify those in greatest need and look into the kinds of problems they had for the purpose of developing some teaching materials and teaching part-time. At the same university, from 1963 to 1965 significant researches into the language difficulties of overseas students were made by Alan Davies for the purpose of developing a

standardized test of English proficiency which was later known as the English Proficiency Test Battery (EPTB) or (Davies Test) (Sànchez, 2001).

Vera Adamson used the Chaplen test before 1971 for placement of students who were non-native speakers of English into university language courses, and that test "was based on mixture of syntactic and lexical items" (Johns, n. d., p. 1, as cited in Alderson et al, 2015). According to Alderson et al (2015), it was the first reference to diagnostic English language testing. They were tests of proficiency but they were based on diagnostic purposes. More importantly, "when attempts have been made to diagnose foreign language ability, these have tended to focus most upon grammar. The diagnostic grammar tests developed by Tim Johns at Birmingham university in the UK in the 1970s and early 1980s are a case in point" (Alderson, 2005, p. 171).

Johns felt that was considerable value in assessing, for diagnostic purposes, whether a student could manipulate grammatical forms accurately and use them appropriately in suitable contexts" Alderson, 2005, p. 171). The test which is called the Birmingham Assessment and Diagnostic Test (BADT) was used to identify learners' strengths and weaknesses in English grammar and it revised several times in 1976, 1984, 1991 and 1999 (Alderson et al, 2015, p. 39). It was a multiple-choice battery of mostly verb tenses and grammar, organized diagnostically so that students who were weak in those areas could then attend appropriate remedial classes entry (T.F. & C.M. Johns, 1977, as cited in Sànchez, 2001, p. 175). Since 1975-1976 the test has been compulsory for all international postgraduate students on entry (T.F. & C.M. Johns, 1977, as cited in Sànchez, 2001, p. 175).

The test includes 130 items "to achieve test stability" consisting four-option multiple-choice items, whose diagnostic areas (initially 12) were based on several criteria:

- Importance in written academic discourse.
- Problematic for learners of English from a wide range of L1 backgrounds and levels of competence.
- Covering areas which are not normally taught explicitly in English courses or which are badly taught ("on the assumption that if a student is able to obtain a good score on such area, that must be a result of language acquisition (e.g., from extensive exposure to English or use of English,"

(Johns, n. d., p. 1, as cited in Alderson et al, 2015, pp. 39-40).

Students were given their overall score, an indication of areas on which they fell below a criterion score, and the remedial grammar classes in which they should be placed to deal

with those diagnostic areas (Johns, n. d., p. 4, as cited in Alderson et al, 2015, p. 40). Johns (1976) in an unpublished document presents a rationale for diagnostic testingwhich is specifically related to features of students' entry behaviour, which arises from previous learning of second language; what is not known? And how does what is known differ from target behaviours? (Johns, 1976, as cited in Alderson et al, 2015, p. 40). Moreover, in the same reference it is mentioned that Johns distinguishes between two types of diagnosis; macro-diagnosis which provides a general view and profile on the basis of overall languages skills and micro- diagnosis on the basis of the students' needs within the system of the target language.

According to Alderson et al (2015), another early treatment of diagnosis in second or foreign language testing was that of Bernard Spolsky in 1981. Spolsky (1992) discusses issues of tests form and test content, states that diagnostic tests are linked to curriculum and are set between the testing of discrete items, their integration into larger contexts and the performance of integrative functions. The main purpose of diagnosis is to follow the execution of the curriculum and provide feedback to both teachers and learners.

Another contribution to diagnostic testing is that of Shohamy's (1992) model by which the diagnostic information provided were full, detailed and innovative and includes a variety of language dimensions. Therefore, Spolsky's thoughts and Shohamy's study emphasize the necessary relation between the school curriculum and the diagnostic tests contents and assessment in general (Alderson et al, 2015, p. 40).

The teaching-learning process can be evaluated through the use of testing before, during and at the end of courses. Diagnostic testing as one of the most useful assessment methods is an initial and basic element to make the teaching and learning more effective. To measure the learners' prior grammatical knowledge accurately, diagnostic grammar tests should be characterized by special features. These qualities are going to be discussed both generally and in relation to grammar tests.

1.5.3.   Criteria of an Efficient Diagnostic Grammar Test

Assessments can be conducted through a wide range of methods to serve the intended purposes they are designed for. However, testing is one of the most useful methods by which the learning-teaching process can be evaluated at different times of instruction. Harris and McCann (1994) define a test as *"any form of formal assessment in any language area which is administered under conditions which ensure measurement of individual performance in any given area"* (1994, p. 93). Tests measure the learners' language performance most of the time

in the form of grades to serve different purposes (Douglas, 2014). Thus, as any test, diagnostic grammar tests must be characterized by special features that make them good and useful. The following are the characteristics of educational diagnosis in general and grammar in particular.

1.5.3.1. Objectives

Diagnosis is an understanding of problems and difficulties in a present situation in terms of its causes or the factors leading to it and its main objective is to detect those factors and causes that bear more causal relation to the progress of the students' learning (Kumar, 2012). The objective of a diagnostic grammar test is to identify areas that need consolidation and more support and search for the factors and causes that have direct relation with learners' learning difficulties. This is for the purpose of setting constructive instructional plans. If proper attention is given to that, the test meets the aim it is intended for and effective learning may result.

1.5.3.2. Reliability

Reliability refers to the degree to which a test gives the same results every time it is administered. In this respect, *"reliability refers to the consistency with which a test can be scored, that is, consistency from person to person, time to time, or place to place"* (Sárosdy et al, 2006, p. 134). The consistency of assessment means that under the same conditions the assessment procedure would produce the same results (Harris and McCann, 1994). That means, if it is administered for another time by other examiners with similar examinees in the same school or other schools or institutions under similar conditions, it gives the same results. According to Gipps *"Reliability is concerned with the accuracy with which the test measures the skill or attainment it is designed to measure"* (1994, p. 67). Thus, it is a matter of how far one can trust the results of the test since they reflect the learners' ability. To conclude, Purpura (2004) refers reliability *"to the precision and consistency with which we are able to measure performance"* (2004, p. 149). So, reliability refers to both accuracy and consistency in test results.

The improvement of the reliability of any diagnosis is based on some points. As stated by Purpura (2004), the test score reliability can be improved by adopting *objective scoring techniques* that involve no personal judgment in the scoring process and by following an agreed-upon scoring rubric. Furthermore, increasing the number of tasks on a test or the

number of similar examples of particular structures can raise reliability. Moreover, the improvement of the diagnostic test reliability includes the use of a satisfactory sample of learners' reaction on the tests as a basis of the study (Kumar, 2016). In addition to reliability, a good diagnostic grammar test should possess a construct validity.

1.5.3.3. Construct Validity

Validity refers to the degree to which a test measures what it is intended to measure. If it does not measure what it is designed to measure, then its use is misleading (Gipps, 1994). That means that the interpretations and uses made on the basis of the test results are not valid. Validity refers to the degree *"to which the inferences or decisions we make on the basis of test scores are meaningful, appropriate and useful"* (American Psychological Association, 1985, as cited in Bachman, 1990, p. 25). In this way, validity refers to the degree to which test results reflect what it is tested. Validity is a unified concept but it has several aspects. There are face validity, content validity, etc.… However, Bachman and Palmer (1996) focus on *construct validity* as a second criterion of a good test. According to Gipps (1994),

> *Construct validity itself relates to whether the test is an adequate measure of the construct, that is the underlying skill being assessed. Important to the development of an assessment then is a clear and detailed definition of the construct"* (1994, p. 58).

In this way, it is necessary to determine the construct wanted to be measured before starting constructing a test. Related to grammar, construct validity refers to which degree the test scores interpretations justify grammatical ability and not other abilities (Purpura, 2004). In diagnostic grammar tests, the attempt to diagnose learners' difficulties in grammar by examining test papers was reasonably correct to reveal types of questions that they may or may not answer correctly. For more specific insights on their grammatical knowledge in particular areas, diagnostic tests should identify precise items and questions for the purpose of providing sufficient quality data.

1.5.3.4. Objectivity

Objectivity as an essential characteristic of a satisfactory diagnosis refers to the degree to which the test's results are the same if they are corrected by others. The results are the same even if the tests are scored by different scorers without the interference of their beliefs and personal judgements. Hence, the test is objective if the scores are given free from subjectivity,

to be fair, correct without being influenced by beliefs or other conditions. Kumar (2016, p. 10) states, "The elimination of widely varying personal judgments in diagnosis is essential if diagnostic procedures are to be used with any degree of precision". In addition, tests should be ease to administer, score and interpret. The scoring key and the marking scheme help in increasing the objectivity of the test….and quickening the correction process. (Mohan, 2016)

1.5.3.5. Practicability

Practicability refers to the facilities that make the test easy. It means ease of administration, scoring and interpretation. According to Thornbury, practical tests *"are relatively easy to design and they are very easy to set and mark"* (1990, p. 141). That means that a test that requires many teachers to mark the answers such as some speaking tests or many hours for teachers to complete the correction is impractical. It deals with the means that make the test easily conducted in terms of the human, material and time resources. It refers to *"all aspects concerning tests which affect time and resources"* (Harris and McCann,1994, p. 92). These considerations refer to the human and financial means, time of administering, correcting, scoring the test and time of interpreting its results. A diagnostic grammar test should be then easy to administer, score and interpret. A test that requires too much money and too much time is impractical (Brown, 2001). For instance, in the case of extended-production tasks in either written or spoken forms, teachers need to consider the costs of time and people to score them. If they are beyond the available resources, they are impractical and teachers then need to reconsider their objectives and priorities. Another feature of practicality is the ease in interpreting its results which should give sufficient information to make appropriate decisions (Purpura, 2004). Thus, when designing diagnostic grammar tests, it is very important to take into consideration these important necessities.

1.5.3.6. Authenticity

Authenticity has become an emphasized characteristic of useful tests as a result of the appearance of the communicative approaches to language teaching and testing (Hawkey, 2005). It refers to the degree to which the test tasks reflect the language used in real life situations. Alderson (2005) lists a set of features from which we focus on those that have relation with authenticity and grammar; diagnostic tests are likely to be less 'authentic' than proficiency or other types of tests, they are more likely to be discrete-point than integrative, or more focused on specific elements than on global abilities and finally, diagnostic tests are more likely to focus on language than on language skills and on 'low-level' language skills

(like phoneme discrimination in listening tests) than on higher-order skills, which are more integrated. (Alderson et al, 2015, pp. 45)

1.5.3.7. Interactiveness

A test is qualified as *interactive* if it succeeds to engage the examinees' language abilities wanted to be measured. Purpura relates interactiveness to:

> *the degree to which the aspects of the test-taker's language ability we want to measure (e.g, grammatical knowledge, language knowledge) are engaged by the test-task characteristics (e.g, the input response, the relation between the input and response) based on the test constructs.* (2004, p.153)

That means that the constructs, either language knowledge or language ability, intended to be measured by the test design should be engaged by good choices of tasks. In the case of grammar tests, interactiveness refers to the degree to which test tasks succeed to draw the testees' grammatical ability as intended by the test design and not something else. (Purpura, 2004).

This deals with the role of the test tasks in engaging testees' language abilities. The fifth quality of a good test deals with the influence that tests have on learners and the whole society.

1.5.3.8. Impact

Impact refers to the relationship between the interpretations of the tests results and the decisions undertaken based on these interpretations. In this way, it refers *"to the link between the inferences we make from scores and the decisions we make based on these interpretations"* (Purpura, 2004, p. 154).

A special case of test impact is washback or backwash, which is related to the test influences on the teaching and learning situations (McNamara, 2000). Washback refers to the effects of the test on learners, teachers and teaching materials. It may be positive or negative. Tests can be beneficial if they have positive effects on attitudes such as a feeling of accomplishment and on actions such as motivation to study hard (Purpura, 2004). However, it can be negative if the test for example adjusts teaching objectives towards only what the test requires as ignoring *"subjects and activities that did not contribute directly to passing the*

exam, and that examinations "distort the curriculum"" (Vernon, 1956, p. 166, as cited in Cheng et al, 2004, p. 9).

In case of diagnostic grammar tests, washback can be observed through the testees' attitudes and actions as well as their learning progress. This may appear in the change that has occurred in the learners' level as a result of the under-taken decisions. And this may also manifest in their commitment to extend their knowledge of grammar for the purpose of improving their grammatical ability (Purpura, 2004). Therefore, it is very important to predict in advance what effect the test would have on testees, and through this impact it is evaluated as a useful test or not.

1.5.3.9. Necessary features of effective diagnosis

Kumar (2012) states some necessary features of a good diagnostic test; namely appropriateness, comprehensiveness, comparability and exactness. Any satisfactory diagnosis must be appropriate to the programme. Moreover, a diagnosis that defines a very general area is less useful than one that challenges errors more precisely. This doesn't mean to focus on certain limited aspects and neglecting all the others, but giving each aspect the necessary attention provides the requirement of comprehensiveness. In addition to that, diagnostic procedures that give comparable results are basic to intelligent interpretation. However, the interpretation of diagnostic results usually depends on the experience of similar data. Another significant feature is exactness. Diagnostic tests that give vague results do not achieve the intended purposes they are designed for.

Besides, clarity is an essential feature of test effectiveness. It is obtained by carefully formulating the question, using simple and direct language, using correct punctuation and grammar and avoiding unnecessary wording (Singh, 2009, p. 120). Questions should be clear worded with no ambiguity (Mohan, 2016, P. 157).

In addition to the aforementioned requirements of an effective diagnostic test, good tests should be designed and interpreted by qualified diagnosticians.

1.5.3.10. Qualified Diagnosticians

A satisfactory diagnosis requires well qualified educational diagnosticians who must be specialists or teachers. They must have an overall understanding of the educational programme on which the diagnostic test is based (Kumar, 2016).

In the words of Sheldom (1960) the following principles need to be understood by a teacher to check the disabilities of his pupils diagnostically.

1. Diagnosis is an external aspect of teaching and is a preliminary step to sound instruction.
2. Diagnosis should be continuous because child's growth in various skills depends on the sequential development of each skill, which promoted through the teacher's knowledge of the progress of each child.
3. Diagnosis is an individual task and reflects the fact each child is different.
4. Since the instrument of diagnosis has not been perfected, the limitations of each instrument must be thoroughly understood.

(Sheldom, 1960, as cited in Kumar, 2012, P. 11)

More precisely, diagnosticians should bear in mind that an effective diagnostic test should be characterized by the following.

1. It should be an integral part of the curriculum emphasizing and clarifying the important objectives.
2. The test items should require responses to be made to situation approximately as closely as possible to be functional.
3. It must be based on experimental evidence of learning difficulties.
4. It should reveal the mental process of the learner sufficiently to detect point of error.
5. It should suggest or provide specific remedial procedure for each error detected.
6. It should be designed to cover a long sequence of learning systematically.
7. It should be designed to check forgetting by constant review of difficult elements as well as to detect faulty learning.

(Cook, 1958, as cited in Kumar, 2012, P. 14)

An effective diagnostic grammar test should be based on content from the curriculum to reveal an individual's weaknesses and difficulties in a certain area of grammatical ability. Its items and questions should really reflect the learners' abilities and pinpoint errors. Moreover, they should provide information on the causes behind making such errors and the factors leading to such difficulties. Based on the data obtained and the results analysis, teachers should set specific remedial procedures for specific difficulties since diagnosis is intended to lead to treatment (Alderson et al, 2015)

Therefore, when designing diagnostic tests particularly in grammar, it is of great importance to consider these important necessities that an effective test should possess. An effective grammar test is the test that can provide detailed information about the learners' grammar weaknesses and problems. And this can better be achieved through the right choice of tasks.

1.5.4. Types of Tasks in Grammar Tests

An effective grammar test is the test that can provide detailed information about the learners' grammar knowledge and their ability to use this knowledge meaningfully and appropriately. The purpose of designing diagnostic grammar tests is to provide data about the learners' grammar weaknesses and strengths, and areas of difficulties. Since it is difficult to observe these weaknesses and difficulties directly, responses of the test items must be used to make the necessary inferences. These responses are converted into scores; this is called score-based references (Purpura, 2004). Thus, what is more important is the choice of the tasks that could really reflect the test takers' grammatical abilities and pinpoint areas of difficulties. Before dealing with the appropriate tasks in diagnostic grammar tests, it is appropriate to give an overall overview of types of tasks in grammar tests in general.

There are different sorts of tasks in which grammar can be tested. This variety of tasks types found on grammar tests can be classified according to many categories. Burgess and Head state that:

> *Testing the learners' knowledge and use of grammar can be based on skills – focused tasks that are based on the four skills: listening, speaking, reading and writing. However, other tests can be based on tasks that emphasize explicitly on learner' knowledge and control of language structures, i.e. competence* (2005, p. 65).

Burgess and Head (2005) classification depends on the way grammar is tested; either through discrete- point items or integrative items. According to Heaton (1995), the most common types of grammar tasks in discrete- item tests can be multiple choice items, error-recognition and correction task, rearrangement items, completion items, transformation items, joining elements (combination items) and addition items (as cited in Sárosdy et al, 2006). However, most common categories classification depends on the type of scoring procedures and the type of response (Purpura, 2004).

In relation to the types of tasks according to the scoring procedure, there are two types; objective test tasks and subjective test tasks. In the former, the evaluation of performance depends on the criteria of correctness rather than personal judgment such as multiple-choice tasks. However, the latter requires expert judgment to evaluate the examinee's performance such as evaluating essays (Purpura, 2004).

As the main objective of any grammar test is to elicit information about the test takers' performance manifested in their answers, it is better to classify grammar tasks according to types of responses. According to Purpura (2004), there are two types of responses; selected-response tasks and constructed-response tasks which involves two types: limited-production *tasks and extended-production tasks*

As stated by Purpura (2004), selected-response tasks ask examinees to select the correct, best or most appropriate answer from two or more alternatives which may be in a form of a word or sentence. However, constructed-response tasks require test-takers to construct responses which vary in length. In limited-production tasks, they are asked to say or write from a word to a sentence. These type of tasks *"require some production of grammatical items but in a controlled manner"* (Richards, 2015, p. 285). In extended-production tasks, test-takers are required to say or write more than two or three sentences Purpura (2004). According to Jones (2012), *"these tasks measure an examinee's ability to use grammatical forms and structures to convey meaning at discourse level through writing and speaking"* (as cited in Richards, 2015, p.286). Normally, results obtained from selected-response tasks and limited-production tasks provide information about pupils' explicit knowledge of grammatical forms. However, *extended-production tasks* assess the test-takers' ability to use the target grammatical forms fluently and appropriately in real-life situations (Lee et al, 2008).

Ur (2012) classifies grammar-test items into two types: closed-ended tasks and open-ended tasks. Closed-ended items require pupils to answer with one predetermined right response. Thus, they are easily assessed and graded. They can involve multiple (or dual) choice tasks, matching sentence-halves, rewriting, mistakes correction, transformation and guided gap fills. They are designed to prove the pupils understanding of grammar rules and their ability to apply them. However, *open-ended items* ask examinees to invent their own phrases, sentences or longer passages either in written form or oral one. That is why, they are more difficult to assess and have less predictable answers**.** They are devised to measure the

pupils' ability to produce correct grammar in an unguided output such as open-ended sentence completion, sentences composition or translation (Ur, 2012).

Depending on what has been mentioned above, one can specify the types of tasks used on grammar tests as follows.

1.5.4.1. Selected-Response Tasks

In selected-response tasks, the predetermined answer may be a word or sentence. They are used to measure recognition or recall of grammatical forms, meanings or both. One of the advantages of such type is that it can be used to measure more than one discrete-point of grammatical knowledge within the same item (Purpura, 2004). These are some common examples of this type of tasks.

Most of the gap-filling tasks require the test-takers to fill in the gaps with suitable words from a given set of possible answers. One common type of gap-fill task is multiple-choice (MC) *task.* It is easily administered and objectively scored since the examinees are given response options from which they choose the answer. However, it can be difficult and time-consuming to develop and easy for guessing (Purpura, 2004). Burgess and Head (2005) advise learners to examine the gapped sentence in order to guess the answer before looking at the offered options. These responses can be single words or phrases.

Multiple-choice error identification task is a type of error identification. The test-takers are given options from which one is not correct and they are asked to identify it. Burgess and Head (2005) define them as tasks that focus on identifying incorrect use of English, and in which possible errors are highlighted and only one is incorrect. In another type of error identification activities, the test-takers are not given options to select one but they identify the errors by checking the given sentences (Burgess and Head, 2005).

The matching task presents two lists of words, phrases or sentences and examinees are asked to match them. For avoiding the problem of guessing, one of the two lists contains extra distractors. This type of tasks can require candidates to match texts in text-matching exercises (Burgess and Head, 2005).

The discrimination tasks are designed to measure the examinees' ability to distinguish between two similar areas of grammatical knowledge. They are given response choices which

are opposites or different from each other. They may be agree- disagree, right –wrong, same-different. These choices may be sentences or images (Purpura, 2004).

The noticing task asks the test-takers to notice some particular feature in the language in texts for example by circling or underlining them. It is also known as a kind of conscious-raising task since it gets the pupils construct a representation of the grammatical feature (Ellis, 1997, as cited in Purpura, 2004).

The grammaticality-judgment task is used to measure the pupils' ability to judge sentences grammatically; either acceptable or not. The sentences that are presented are either well or ill-formed (Purpura, 2004).

1.5.4.2. Limited-Production Tasks

This type of tasks *"elicit a response embodying a limited amount of language production"* (Purpura, 2004, p. 134). The answers may be just one word or a sentence. In limited production tasks, there may be more than one possible answer, but they are predetermined and predictable.

The gap-filling tasks require the test-takers to fill in the gaps with their own words that fit grammatically and meaningfully. A common type of these tasks is cloze activities in which words have been deleted at regular intervals and examinees are asked to supply their own words (Burgess and Head, 2005). Another common task of this type is cued gap-filling activities in which cues are provided to be transformed so as to fill in the gaps correctly such as correct forms of verbs (Purpura, 2004).

The short- answer task, as its name indicates, requires test-takers to produce responses that may be a word, a sentence or two. This type is used to test different areas of grammatical ability and can be scored as right or wrong such as asking the examinees to fill in a form from a given advert (Purpura, 2004).

The dialogue (or discourse) completion task (DCT) asks examinees to complete a short exchange or dialogue in which parts of a turn are deleted. Their answers must be grammatically correct and meaningful. DCT is useful to test examinees' grammatical performance (Purpura, 2004).

In information- transfer activities, examinees are required to transfer information for example from a passage to a table or vice versa using the gerund (Lee et al, 2008). Sentence

transformation tasks ask the examinees to transform the sentence into a new grammatical form without changing its meaning using the given key to start the new one (Burgess and Head, 2005).

Word formation tasks test the test-takers' knowledge of word families, their ability to derive words based on the same root. This knowledge involves knowledge of prefixes and suffixes and the changes within the structure of the words (Burgess and Head, 2005).

Error identification and correction tasks differ from the previous types of error identification in requiring the examinees to identify the errors and correct them. This sort is used to assess their ability to recognize incorrect uses of English and their correct forms (Burgess and Head, 2005). In dictation tasks, testees listen to passages and write at the same time. In this type of tasks, examinees use a variety of skills to write correctly (Geranpayeh and Taylor, 2013).

1.5.4.3. Extended-Production Tasks

This type of tasks tests the test-takers' ability to use grammatical forms to express meanings. This language production, varies in length. Thus, the responses should be scored using predetermined procedures of scoring (Purpura, 2004). These are some examples of this type of tasks.

According to Purpura (2004), The information-gap task (info-gap) requires the examinees to use areas of grammatical knowledge to exchange information. They are asked to ask each other questions for the purpose of completing a set of information such as using wh-questions to get information to write a report about a famous person. This type of tasks is usually performed orally, it is very useful to use audio and video tapes.

Short-telling and reporting tasks ask examinees to write short stories or report events; using information either from their own experiences or imagination. These tasks are used to test the candidates' ability to convey meanings (Purpura, 2004).

In the role-play and simulation tasks, the test-takers are required to play roles for the purpose of solving a problem or making decisions collaboratively. These activities elicit a wide range of examinees' language ability; grammatical, pragmatic and topical knowledge as well as their affective competence to persuade others (Purpura, 2004).

Some types of these activities are writing summaries and essays. Concerning essays, preparing this type seems to be very easy since the teacher needs only to write a prompt for written composition and let the testees compose an answer. It is a subjectively marked test (Alderson et al, 1995).

These are the general types of tasks used in grammar tests, but among them there are specific types of tasks that are more suitable for diagnosing learners' grammatical ability.

1.5.5.   Types of Tasks in Diagnostic Grammar Tests

This is a general view of types of tasks included in grammar tests but among them what tasks are suitable for diagnostic grammar tests? The aforementioned types of tasks, which are currently in use, are used to elicit evidence of language performance to serve different purposes. For diagnostic purposes, the most appropriate tasks are the tasks that can elicit specific and trustful information about the learners' weaknesses and areas of difficulties. As stated by Alderson (2015), "diagnostic tests are more likely to be discrete-point than integrative, or more focused on specific elements than on global abilities (Alderson et al, 2015, P. 45). Therefore, the most suitable tasks in diagnostic grammar tests can be types of tasks used in discrete-point tests such as multiple choice items, error-recognition and correction task, rearrangement items, completion items, transformation items, joining elements (combination items) and addition items as mentioned previously. This type of tasks depends on objectivity in the scoring procedure in which the evaluation of performance depends on the criteria of correctness rather than personal judgment (Purpura, 2004).

Results obtained from selected-response tasks and limited-production tasks provide information about pupils' explicit knowledge of grammatical forms. However, *extended-production tasks* assess the test-takers' ability to use the target grammatical forms fluently and appropriately in real-life situations (Lee et al, 2008). Thus, the most appropriate tasks in this way can be selected-response tasks and limited-production tasks.

As stated by Purpura (2004), selected-response tasks ask examinees to select the correct, best or most appropriate answer from two or more alternatives which may be in a form of a word or sentence. These are some examples: gap-filling tasks, multiple-choice (MC)tasks, multiple-choice error identification tasks*,* error identification, matching tasks, discrimination tasks, noticing tasks*,* grammaticality-judgment tasks.

However, limited-production tasks require test-takers to construct responses. In limited-production tasks, they are asked to say or write from a word to a sentence. These type of tasks *"require some production of grammatical items but in a controlled manner"* (Richards, 2015, p. 285). Some examples of this type can be the gap-filling tasks in which the test-takers are required to fill in the gaps with their own words. The words can be deleted ones in cloze activities or correct forms of verbs. In addition, there are short- answer tasks, dialogue (or discourse) completion task (DCT), information- transfer tasks, sentence transformation, word formation tasks, error identification and correction tasks and dictation tasks.

In the abovementioned types of items, the responses are predetermined or more predictable and easy to score. These items are designed to prove the pupils understanding of grammar rules and their ability to apply them, for the purpose of using them meaningfully later on.

1.5.6. Educational Diagnosis Process

Educational diagnosis is a methodological process that follows some steps. According to Kumar (2012), these essential stages are:

1. Identification of students who are having learning difficulties.
2. Locating the errors of learning difficulties.
3. Discovering causal factors.

<div align="center">(Kumar, 2012, P. 15)</div>

However, Ross (1956) added two other steps when suggesting five levels of diagnosis and which are:

- Who are the pupils having the problem?
- Where are the errors located?
- Why did the error occur?
- What remedies are suggested?
- How can the error be prevented?

<div align="center">(as cited in Kumar, 2012, p. 11)</div>

The first four levels of diagnosis are grouped as corrective diagnosis however the fifth one is known as preventive diagnosis (Kumar, 2012).

In more details, the first step in educational diagnosis is the identification and classification of pupils having learning difficulties. This can be done through gathering relevant data during constant observation of the pupils during informal classroom activities or from achievement tests or simply through designing diagnostic tests before instruction begins. The second step is the determination of the specific nature of the learning difficulties through observation or analyzing oral or written responses. This leads to the identification of the main problems and the areas need to be improved. An essential step is the determination of the factors and reasons which cause the learning difficulty. Finally, the teacher should set remedial measure and appropriate treatment to rectify the difficulties. The next step is planning for the prevention of recurrence of the errors and difficulties in the process of learning (from Your Article Library). Some others add another final important step and which is retest.

1.5.7. Construction of Diagnostic Grammar Test

Diagnostic tests can be standardized or teacher-made. However, teacher-made tests are more effective since each teacher knows the specific needs of his learners and depending on that s/he designs the test. What is required is a valid, reliable and objective test which really reflects their abilities and problems. Depending on what has been said earlier about general steps to prepare a well- constructed diagnostic test, we attempt to apply the main steps and procedures which help a lot in constructing a valid, reliable and objective diagnostic grammar test. These stages are planning, writing items, assembling the test, providing directions, providing the scoring key and marking scheme and reviewing the test (Somashekar, 2012).

1.5.7.1. Planning

Obviously, planning is the first important step in the construction of any test mainly diagnostic tests since the major goal of such testing is the identification of learners' weaknesses and strengths and learning difficulties to be made as a basis and support in instructional decisions- making. Hence, a careful and precise planning is a key element for a diagnostic test to successfully achieve its intended purposes. Mangal and Mangal, (2019) emphasize important points that should be determined in advance to prepare such test; namely what are the areas of weakness or learning difficulties? How can a unit, sub-unit or concept be isolated for diagnosing in depth? What are the pre-requisite knowledge, skills and behavior required for the learning of the new points? And what types of test items are to be included?

The first step in this stage is the identification of the grammar areas which are really difficult for the learners. This is through collecting valid, reliable and useful data about the students either formally or informally. In this way, "the unit, on which a diagnostic test is based; requires a detailed exhaustive contest analysis. It is broken into learning points without omitting any point…As far as a diagnostic test is concerned, it is not very necessary to know the relative importance of the learning points." (Kumar, 2012, p. 19). In other words, the content should be analyzed to identify the pre-requisite knowledge required for the learning of the new concept. This content should be divided into simple teaching points for diagnosing in depth. For getting useful and precise information, "it is inadvisable to take all units or even a full unit for the construction of diagnostic test. Diagnostic tests should be constructed based on single concepts which should be then joined and combined to identify the learning difficulties and weaknesses" (Mangal and Mangal, 2019, p. 112). Selecting appropriate item types to diagnose the determined points is of a great importance for a successful diagnostic test. A careful preparation of questions helps a lot in identifying the areas of weaknesses. The planning stage involves also taking decisions about the scoring key and the method of interpreting the results.

The next most important step is deciding about the types and numbers of items that really reflect the learners' grammatical abilities and pinpoint areas of difficulties.

1.5.7.2. Writing Items

The diagnostic grammar test is a set of items prepared depending on a detailed analysis of the grammar points wanted to be measured and depending also on the essential grammar pre-requisites which are necessary for learning the new points. In the same vein, Mangal, and Mangal, (2019) claim that the appropriate choice of items depended on three main aspects:

1. The nature of the contents of the sub-unit or single concept.
2. The pre-requisite behavior in terms of the previous knowledge, skills needed for learning the sub-unit or concept.
3. The expected behavior, i.e., knowledge, skills etc. acquired by the learners after studying such contents. (Mangal and Mangal, 2019, p. 112)

Concerning the types of items suitable, it appears for diagnostic purpose that short answer questions involving one or two steps, are used widely (Kumar, 2012). And these types can beselected-response tasks or limited-production tasks. Selected-response tasks require

examinees to select the correct, best or most appropriate answer from two or more alternatives which may be in a form of a word or sentence.

However, limited-production tasks require test-takers to construct responses. In limited-production tasks, they are asked to say or write from a word to a sentence (Purpura, 2004).

The questions should be easy, clear, written in simple language and suitable for average students of that age or grade. Theyhave to be specifically related to the learning points and serve efficiently in identifying the weaknesses of learners (Kumar, 2012).

1.5.7.3. Assembling the Test

It is advisable to prepare a set of items and then choosing the suitable ones that best serves in achieving the test purposes. After writing the items on different learning points, they have to be assembled into a test form in which the learning points can be arranged sequentially in order of their complexity (Somashekar, 2012)

1.5.7.4. Providing Directions and Preparing Scoring key

Along with the writing of the items, some necessary basic elements should be prepared carefully, namely; instructions, scoring key, marking scheme and model answers. Instructions "explain exactly what is required to answer each question type" (From Graduate Management Admission Council, 2014, p. 14). Hence, they should be clear, understandable and precise.

A scoring key and model answers should be made along with the writing of the items for the diagnostic test for helping in its proper and exact interpretation (Mangal and Mangal, , 2019). However, the marking scheme is essential as it indicates:

- the number of points or steps expected in the answer
- the outline of each point or step expected in the answer
- the weightage to each of these points or steps

and it helps the examiner to bring about a uniformity of standard in assessing and thereby increases the objectivity of the test. Many examiners may be involved in assessing the answers, thus quickening the correction process (Mohan, 2016, pp. 158-159).

1.5.7.5. Reviewing the Test

It is of a paramount importance to review the test before printing. This is for the purpose of identifying any errors done unconsciously or ambiguous instructions or any

incompatibility of scoring keys with responses. If possible, the test items would be better reviewed by experts or experienced teachers to modify or delete test items if necessary (from Your Article Library).

Although teachers strive hard to make their tests useful, they may find difficulties in assessing their pupils' grammatical ability.

1.5.8. Limitations of diagnostic tests

Diagnostic tests are found to suffer from some limitations. Some barriers which should be taken into consideration can influence diagnostic tests results negatively, among which the teacher's attitude, patience, will and effectiveness is the most influential. The teacher requires to be patient and competent enough to design, implement and get use of this type of tests. Hence, faulty method of sequencing the study testing, data collection and interpretation can mislead decisions (from Your Article Library). The inability of arranging time to conduct the study forms another serious problem.

According to Mangal and Mangal (2019), since diagnostic tests   can be employed only for diagnosing the weakness or learning difficulties of the learners in a particular area of a school subject, topic or concept, the scope and application of such tests is quite limited. Moreover, developing and constructing an effective diagnostic test which really reflects the students' abilities is not an easy task. This requires teachers to be patient and competent enough to design the items, analyze the learners' responses with a great caution and depth in terms of error analysis and interpretation for the purpose of determining the exact source and probable cause of the learning difficulties and weaknesses. Because of such hardship in constructing such tests, teachers make use of ready diagnostic tests available in the market or online transaction. However, these tests might not suit the requirements of the target students and might not serve the required purpose. In addition, diagnostic tests cannot be used for serving many purposes at the same time such as providing feedback about teaching and learning, the realization of the learning objectives, teaching methods and so on. In their words, they summarize such limitations as "(1) Employable only for diagnosing the learning difficulties for the students in a quite small area of a school subject, (2) their construction as well as analysis of the outcomes involves a lot of hardship and difficulties, (3) They cannot be used for serving many useful formative and summative evaluation functions much similar to achievement tests (Mangal and Mangal, 2019, p. 120). However, in spite of such limitations

their importance can never be underestimated and these firmly stand for the realization of that which is required from these (Mangal and Mangal, 2019, p. 120).

Another limitation is that most of time teachers can identify problem areas, but they seldom find the reasons for the difficulties and cannot prescribe solutions to overcome them (Kumar, 2012). Moreover, faulty method of data collection and test can be a serious barrier in diagnostic tests (Your Article Library)

Another problem is the choice of the appropriate tasks that can really reflect the learners' grammatical ability and pinpoint their strengths and weaknesses (Purpura, 2004). These tasks may not provide a detailed idea about their grammar even if they focus on a particular grammar area. Moreover, teachers find difficulty to set all the questions in one task that provide useful information of the learners' grammatical ability.

Another noteworthy point is the way of scoring grammatical ability, either teachers use dichotomous scoring and accept responses as right or wrong or partial scoring according to the developmental stages of learning (Purpura, 2004). Many of the SLA researchers (e.g. Clahsen (1985), Pienemann and Johnson (1987), Ellis (2001b)) claim that structures seem to be learned in a fixed developmental sequences (as cited in Pupura, 2004). Thus, language teachers should take this into consideration when scoring grammar tests or consider responses as right or wrong if there are some correct points in their responses. However, testees who have an intermediary knowledge of grammar are being treated as if they have no knowledge at all. That's why, some researchers such as Clahsen (1985) suggest that structures should be measured in a way in which they are selected and graded in terms of their order in developmental sequences in a way such as partial scoring (as cited in Purpura, 2004).

1.6. Conclusion

Chapter one presented some concepts related to educational diagnosis in general and grammar diagnosis in particular. It started with some definitions of assessment highlighting the distinction between this term and other terminologies such as testing, measurement and evaluation. It has dealt with the different purposes that assessment can serve in classroom and which can be associated with two types of assessment; assessment of learning and assessment for learning. The purposes that classroom assessments intend to achieve can be associated with terms such as "summative functions", "formative functions" and "diagnostic functions ". It gave a general overview of diagnostic assessment historical background and the possible factors that led to the scarcity and brevity of treatment of diagnostic testing in the second or

foreign language education. It highlights the importance of diagnostic assessment in education and the main stages of constructing diagnostic tests after giving basic definitions of such terms.

Chapter one aimed at explaining some concepts related to grammar diagnosis starting with a brief definition of grammar and approaches of its teaching and testing. It has provided general insights about some early treatments of grammar diagnosis in language testing. It has also explained what characteristics an efficient diagnostic grammar test should possess and how it should be constructed. It has presented the essential stages in the diagnosis process. It has also addressed the different types of tasks introduced in grammar tests in general and the sorts of items suitable for diagnostic grammar testing. At the end of the chapter, some limitations of diagnostic tests have been mentioned.

This chapter has provided a general frame of how efficient diagnostic grammar tests should be designed and implemented so as to pinpoint areas of learners' difficulties and weaknesses. But it is just a waste of time and efforts if the information obtained from these tests are not analysed and used to target problems and set appropriate solutions. One of the most useful tools to do so is error analysis method to identify the types of errors and their possible sources. The next chapter will address issues concerning how data obtained from these tests should be examined and interpreted, a detailed study about the grammar point wanted to be taken as a case study and the research methodology followed to conduct this research work.

Chapter two :

Situation Analysis and Research Design

Chapter two:

Situation Analysis and Research Design

2.1.   Introduction

Diagnostic testing as one of the most efficient strategies to improve instruction is of a paramount significance since it helps teachers to determine the learners' difficulties and tailor teaching to their needs. But it is just a waste of time and efforts if they do not take time to analyse and use the information obtained from these tests to target problems and set appropriate solutions. One of the most useful approaches that have been proposed for educational diagnostic assessment is error analysis, which focuses on the kinds of errors the student commits and their possible sources. The results of diagnostic tests coupled with error analysis can be successfully used in planning the suitable remedial teaching. Hence, chapter two first addresses issues concerning how data obtained from these tests should be examined and interpreted. This is through highlighting some concepts related to error analysis. These concepts involve a theoretical background of this method, its models and sources of errors. Before dealing with that, it is important to shed light on the difference between the terms error and mistake because many people often use them synonymously and interchangeably in spite of their considerable differences.

Areas of grammar complexity in any grammar point can be realized by identifying errors, and by analyzing these errors, second or foreign language can be improved. Forming questions mainly wh-questions as one of the most important aspects of English grammar is very important in any language mainly English because communication develops into a longer conversation with the combination of questions either yes/no questions or wh-questions. However, it presents a serious difficulty for the target learners who have studied English at least for seven years and who are expected to be good at English or at least have an acceptable level. Thus, this research work is conducted through applying a diagnostic test to determine areas of strengths and weaknesses of learners when forming wh- questions and the factors that lead to them. Hence, this chapter is an attempt to provide a general overview of the theoretical background of the problem under study, starting with the different types of *wh-* questions with a special focus on *wh-* information questions.

As the present study attempts to examine and discuss problems that the target learners as EFL learners encounter when constructing wh-questions in English, it is worthwhile to refer to their native language as one of the main possible sources of such difficulties. For this purpose, it is essential to study the differences and the similarities in forming such type of questions in English and Arabic and their possible effects in the occurrence of errors.

Next, this chapter describes the research methodology followed to conduct this research work and the rationale of the study. It attempts to explain the research objectives and the research design. It also describes the sample population of the study and mentions its limitations. Then, it highlights the procedures followed to conduct this research work. Finally, it describes the instruments used in this study and the coding system adopted to identify and categorize the students' errors.

2.2. Error Analysis

Errors mainly grammatical errors are no longer considered as indications of failure. Rather, they form fundamental foundations to target specific points that require specific reinforcement and tailor teaching for the purpose of improving the teaching learning process and this is the purpose of educational diagnostic assessment. EFL learners make mistakes and errors during the process of developing their language. This seems to be an expected and usual part of language learning as a completely different opinion has occurred to consider learners' errors as an indicator of their learning process and as a device to improve learning (Corder, 1974). They are significant for researchers, teachers as well as learners since they unmask the strategies the learner employs to discover the language, reveal how far the learner is progressing and represent a way to discover the nature of the target language (Mourssi, 2013, P. 250). In this way, "the job of diagnosis belongs to the field of error analysis" (James, 1980, P. 63 as cited in Abushihab, 2011).

Before moving to the theoretical background of this method, its models and sources of errors, it is important to make a distinction between the terms mistake and error.

2.2.1. The Distinction Between Error and Mistake

Most people view the terms error and mistake as synonymous terminologies, but in fact they are different from each other. The distinction between them is in the ability of self-correction. This is what is called by Corder (1971) and James (1998) as the self- correctability criterion (as cited in AbiSamra, 2003). Mistakes can be self- corrected, but, errors cannot. The term mistake is described as a random slip of a tongue and as a performance fault that the learner is able to correct when his attention is drawn to it, whereas, an error is believed to be not self-corrigible since a learner cannot correct it when his attention is drawn to it (Larsen-Freeman and Long, 1991, p. 59, James, 1998, P. 78, Ellis, 2000, P. 17, as cited in Mourssi, 2013, P. 250).

However, Harmer (2007, p. 96) uses them as a broad term that refers to three categories; slips that are mistakes which learners can correct themselves when noticing them, errors that are mistakes which pupils cannot recognize as errors and cannot correct themselves and attempts that are mistakes which pupils make when they attempt to do something but they do not know how. Thus, error as defined by Ellis (1994) is a systematic and repeated deviation from the norms of the target language. Other dimension to distinguish between mistakes and errors is by categorizing them as errors of performance and errors of competence; which means referring to the former as mistakes and the latter as errors (Corder, 1985, P. 25, as cited in Mourssi, 2013, P. 250). This performance and competence distinction is maintained by most researchers in making difference between errors and mistakes. That case is clearly explained by Dulay et al (1982, P. 139):

> *Sometimes researchers distinguish between errors by factors such as fatigue and inattention (what Chomsky, 1965, called 'performance' factors), and errors resulting from lack of knowledge of the rule of the language (what Chomsky, 1965, called 'competence'). In sum of the second language literature, performance errors have been called 'mistakes' while the term of 'errors' was served for the systematic deviations due to the learner's still developing knowledge of the second language rule system"*.

Snow (1996) distinguishes between errors and mistakes in three areas; the first area is the presence of errors which the learner does not recognize as errors, the second area is the presence of errors which the learner recognizes as errors but which s/he cannot correct and the third area as mistakes which the learner can correct (Snow, 1996, as cited in Nzama, 2010, P. 44).

To sum up, errors occur as a result of incomplete knowledge of the second language rules and they cannot be self-corrected. However, mistakes occur as a result of inattention, fatigue or carelessness and which can be self-corrected when attention is drawn to them.

Errors themselves can be identified and classified in different ways. A major distinction is made between *overt* and *covert* errors by Brown (2000) when he states that "*overtly erroneous utterances are unquestionably ungrammatical at the sentence level. Covertly erroneous utterances are grammatically well-formed at the sentence level but are not interpretable within the context of communication*" (Brown, 2000, P. 220, as cited in Ridha, 2012, P. 28). Another distinction is made by Burt and Kiparsky (1972) between *global* and *local* errors. A global error involves the overall structure of a sentence and can hinder

communication whereas a local error influences a particular constituent in a sentence and do not prevent the message from being understood since the intended meaning can be guessed (Burt and Kiparsky, 1974, Erdogan, 2005, as cited in Mishra, 2005, P.42). Local errors can include noun and verb inflections, articles, auxiliaries and the formation of qualifiers (Dulay et al, 1989 as cited in Mishra, 2005, P. 42). Mishra (2005, P. 28) highlights the distinction between other categories of errors which can also be based on the areas of facts, reasoning and language. they deal with stating things which are not the facts, weaknesses of logic reasoning or lack of competence in syntax, phonology, discourse and so on.

2.2.2. Theoretical Background and Definition

The analysis of errors language learners make has been one of the most controversial subjects in the field of applied linguistics for a long time. According to Keshavarz (1999), there have been two major approaches of studying language learners' errors; Contrastive Analysis (CA) and Error Analysis (EA).

In the middle of the 20th century, CA was very widely accepted in language teaching and was considered as a remedy for language teaching problems. It was formulated by Fries in 1945 and developed by Lado in 1957 (Abushihab et al, 2011, P. 544). Studies based on (CA) refer most of the learners' errors to interference from the mother tongue or first language (L1). Through CA method, errors that learners make can be predicted by comparing the linguistic differences between the mother tongue and the target language (kim, 2001, as cited in Heydari and Bagheri, 2012). The ultimate aim of CA is to compare phonological and morphological systems, syntax and lexical meanings of two or more languages as a result of the need to teach L2 in the most efficient way (Abushihab et al, 2011). According to Ellis and Tomlinson (1980, P. 274) as quoted in Manthata 1990, CA is explained in the following way:

> *Useful information about learning problems can be discovered by comparing the learners' mother tongue (s) and the learners' target language to discover ways, in which they are the same, similar and different. Such a contrastive analysis is normally used to predict which errors are likely to be made by second language learners as a result of negative interference from their first language and thus to decide which items from the syllabus to give special care and emphasis to* (as cited in Nzama, 2010, P.17).

Obviously, languages differ from each other at different degrees. There are some features which are similar and others which are different. These different features may pose

difficulties to the second language learners. Lado (1957, P. 2) claimed that, "the student who comes in contact with a foreign language will find some features of it quite easy and others extremely difficult. Those elements that are similar to his language will be simple for him, and those elements that are different will be difficult" (as cited in Abushihab et al, 2011, P. 545). Accordingly, the difficulties in acquiring the target language are resulted from the negative interference of the mother tongue.

However, studies showed that not all errors resulted from L1 habits transfer, there were many others that appeared during the process of learning which had no relation with L1 (Ellis, 1994). Therefore, by the early 1970's, it was replaced by Error Analysis (EA) because of its inaccuracy y and the high criticism that it received (kim, 2001, as cited in Heydari and Bagheri, 2012).

The shortcoming of CA gave birth to Error Analysis. In this vein, Corder (1984) claims that thanks to CA, the focus shifted from the concern of teaching towards a study of learning (as cited in Tomková, 2013). The contrastive analysis hypothesis only examines errors attributed to negative transfer from the first language whereas error analysis investigates all possible sources of error and thus, outperforms contrastive analysis (Brown, 1987, p. 17, as cited in Mourssi, 2013, P. 250). In the case of EA, "the claim was made that errors could be fully described in terms of the Target Language TL, without the need to refer to the First Language L1 of the learner" (James, 2013, P. 5).

Depending on what has been said earlier, EA provided a methodology for investigating learner language and second language acquisition L2 (Ellis, 1994, P.48). In the same vein, Corder (1967, P. 125) claims that,

> *The study of error is part of the investigation of the process of language learning. In this respect it resembles methodologically the study of the acquisition of the mother tongue. It provides us with a picture of the linguistic development of a learner and may give us indications as to the learning process (as cited in Nzama, 2010, P. 11).*

Thus, it is viewed as a scientific technique that provides evidence of the learner's knowledge of the second language and what strategies s/he uses to learn that language. It gives a good picture of what areas are being mastered and what need more reinforcement. Not only it provides teachers with information about the learners' second language knowledge,

rather it gives hypothesis on how learners acquire that language. According to Richards et al (1996, P. 127),

> *Error analysis has been conducted to identify strategies which learners use in language learning, to track the causes of learner's errors, obtain information on common difficulties in language learning or on how to prepare teaching materials* (as cited in Nzama, 2010, P. 1).

Error analysis is known as a type of systematic linguistic analysis which focuses on the errors that second language learners make during the process of its acquisition, with an attempt to seek for the possible sources of such errors and trying to set a suitable remedy. In fact, its purpose is to find out what learners know and what they do not know (Corder, 1974). Ellis and Barkhuizen describe error analysis as *"a set of procedures for identifying, describing, and explaining learners' errors"* (2005, p. 51). This explanation involves mainly identifying the sources of such errors for the purpose of the adaptation of appropriate teaching strategies to help language learners learn better (Heydari and Bagheri, 2012). Brown (1987, P. 17) defined error analysis as a process through which researchers observe, analyze, and classify learner errors in order to elicit some information about the system operating within the learner (Mourssi, 2013, P. 250). These information may provide useful insights about the possible sources of errors and accordingly suitable remedial teaching can be set.

2.2.3. The significance of error analysis

Making mistakes and errors during learning a foreign language is something unavoidable. What should be avoided is the persistence and recurrence of such errors. This can be done by making use of error analysis. EA is useful in foreign language learning because of several evidences. The ultimate aim of teaching is that learning is taking place even if it is at different degrees and pace. According to Corder (1967), errors are visible proof that learning is taking place (as cited in Nzama, 2010).

Error analysis can be significant for teachers, researchers and learners. Corder (1967) noted that first errors provided the teachers with information about how much the learner had learnt and this reflects the traditional role of EA, and second they provided the researchers with evidence of how language was learnt, and third they served as devices by which the learner discovered the rules of the target language and in this way they help researchers to shed light on the process of second language acquisition (Ellis, 1994, P. 48). Therefore, the

systematic study of errors that foreign language learners commit can provide information about how much a foreign language is acquired and how it is actually learned. In the same vein, Sercombe (2000as cited in Nzama, 2010) mentions three purposes that EA serves, and which are finding out the level of language proficiency the learner has reached, obtaining common difficulties in language learning and finding out how people learn a language. Its evidence can be illustrated in the functions that it serves. According to Corder (1981), EA is a branch of applied linguistics with concern of two vital functions namely theoretical and practical. The theoretical function stems from the methodological perspective where it describes the learners' knowledge of the target language. It helps the researcher to find out the nature of the psychological processes and the relation between the knowledge and the teaching the learner has been receiving. On the other hand, the practical function of EA is the function of that knowledge in remedial action to overcome the mismatch between the knowledge of the learners and the demands of the situation (Corder, 1981, as cited in Mohammed and Abdalhussein, 2015, P. 284). It is a beneficial means to identify weaknesses and problem areas that need more attention. Weireesh (1991) considers errors as a valuable aid for both learners and teachers. For the former, it is a significant device used by learners in order to get helped to learn. And for the later, it serves as reliable feedback to design a remedial teaching method (as cited in Nzama, 2010).

Depending on what have mentioned above, EA provides information about the learner's second language achievement level and the strategies that he uses to learn that language. It identifies the areas of weaknesses and the difficulties that he faces when learning. It gives insights and hypotheses about the process of its acquisition. On the basis of the data obtained from EA, valuable remedial work can be designed.

Errors are signals which indicate that learning is taking place but the well-structured competence of the target language has not mastered yet. Learning grammar is the most essential part in learning any language. That is why, error analysis mainly focuses on grammatical errors.

2.2.4. Error analysis and Grammar

English language has played an important role in the world of information and technology. It is used as a medium of learning, communication, business and studying in international schools and universities. Hence, the ultimate aim of teaching English is to develop the learners' communicative competence which consists of a variety of competences

including grammatical or linguistic competence. Linguistic competence is known as the ability to use the grammar and vocabulary of a language correctly. It is an essential element to develop the learners' ability to use the language correctly and appropriately in any situation. It plays an important role in creating a quality mutual understanding between a speaker or writer and a listener or a reader (Silalahi, 2017, P. 158). Many researchers argue the necessity of grammar instruction to improve learners' accuracy and proficiency (Skehan, 1991, Ellis, 1994; 2002, Lightbown and Spada, 1999 as cited in Nonkukhethhong, 2013). Grammar is considered as the most essential aspect of language learning for second language learners. In order to be able to use a language properly, it is necessary to master its grammar. That is why, error analysis mainly focuses on grammatical errors (Hasyim, 2002). It has been given great attention and interest by linguists and researchers. Yang and Xu (2001, P. 28) claim that literature review in EA reveals that most of the studies conducted in the past are focused either on phonological or morphological and syntactic errors.

In the process of foreign language learning, making errors mainly grammatical errors is common and something inevitable. Learners' errors indicate the state of their linguistic development at a particular time and "refer to systematic incorrect utterances occurring in the process of acquiring the language reflecting their underlying knowledge of the language to date, namely, transitional competence" (Corder, 1967, as cited in Nonkukhethhong, 2013).

Some researchers referred the occurrence of errors to the lack of grammatical knowledge. Cook (2001) mentioned that no-one could produce a single sentence of English without having English grammar in their minds and the lack of a proper amount of grammar in the learners' minds might be a root cause of the mistakes and errors committed by L2 learners (Cook, 2001, P. 26, as cited in Mourssi, 2013, P. 250).

According to (Brown, 2000, p. 217) an error is a noticeable deviation from the adult grammar of a native speaker. In fact, *"knowing more about how grammar works is to understand more about how grammar is used and misused"* (Carter, 1997, p. 35). Thus, knowing more about pupils' grammar knowledge helps a lot in improving their grammar competence. This has been proved by many researches which have confirmed that emphasizing on learners' errors is an effective means to improve grammatical accuracy (White et al, 1991; Carroll and Swain, 1993, as cited in Hourani, 2008). In this respect, *"systematically analyzing errors made by language learners makes it possible to determine areas that need reinforcement in teaching"* (Mungungu, 2010, p. 12). In fact, it does not seek

only to determine areas of difficulties, but it attempts to find out the reasons behind such difficulties for the purpose of identifying strategies which learners use in language learning, identifying the causes of learners' errors and obtaining information on common difficulties in language learning as a basis for teaching or preparing teaching materials (Richards and Schmidt, 2002).

The examination of the unacceptable forms made by foreign language learners can be conducted through *"using any of the principles and procedures provided by linguistics"* (Hasyim, 2002, p. 42). Thus, several procedures were suggested by linguists to analyze errors.

2.2.5.   Models of Error Analysis

Since error analysis appeared as a systematic study, it was necessary to base it on well-defined procedures. Corder (1967, 1974) as the founder of this new trend, sets a model to analyze errors. According to Ellis, his model involves the following steps:

1- *Collection of a sample of learner language*

2- *Identification of errors*

3- *Description of errors*

4- *Explanation of errors*

5- *Evaluating errors* (1994, p. 48)

Ellis (1994, pp. 49-66) provides a detailed explanation of the error analysis steps and clarifies what each step includes and the procedures that should be followed. They are as follows.

2.2.5.1. Collection of a Sample of Learner Language

The first step is to decide what learner language sample is useful for the study and how to collect these samples. According to the size of the sample, there are three types of Error Analysis; either samples of a large number of learners, or of a limited number of learners or just one sample of a single learner. They are called respectively a massive sample, a specific sample and an incidental sample. Obviously, collecting data from a large number of learners is useful to set a comprehensive and sufficient list of errors. Concerning the way of collecting them, they can be collected from natural and spontaneous language use or elicited in some way. As cited by Ellis (1994), Corder (1973) argues the case for elicited data and distinguishes between two types of elicitation; clinical one which encourages the learner to

produce data of any sort and experimental method that elicits the data which contains the linguistic features wanted to be investigated. Another point is collecting the samples of learner language cross-sectionally, i.e. at one point in time, or longitudinally, i.e. at different points over a period of time.

However, Ellis (1994) claims that the majority of researches of EA have been based on a massive sample. They have been used special instruments to elicit the intended data and most of them are cross-sectional.

2.2.5.2. Identification of Errors

The second step after collecting a corpus of learner language is to identify the errors. Ellis (1994, P. 51) defines an error as "*a deviation from the norms of the target language*". He adds that "*an error takes place when the deviation arises as a result of lack of knowledge*" (Ellis, 1994, P. 51). And this what makes it different from a mistake. Therefore, the study should focus on errors and mistakes should be eliminated from the analysis. In addition to distinguishing between errors and mistakes in the errors identification process, it is necessary to make difference between overt and covert errors and deciding in advance what errors wanted to be dealt with; either errors of correctness or of appropriateness. "*An overt error is easy to identify because there is a clear deviation in form ...a covert error occurs in utterances that are superficially well-formed but which do not mean what the learner intended them to mean*" (Ellis, 1994, P. 52)

Kasper (1995) considers identifying and localizing errors in a text as the first step of every error analysis (Kasper, 1995, as cited in Spillner, 2017, P. 13). This procedure seems to be simple, but in case of written expression as an example this identification should be preceded by two complex acts. First the teacher has to compare the learner's production with language norms and detect any deviations. If it is necessary, he can help himself with dictionaries, grammar books and so on. The second essential step in localizing errors is to deduce the testee's intention.

2.2.5.3. Description of Errors

The third step as cited in Ellis (1994) is description of errors without explanation, and in which the focus is only on the observable features of errors in the learners' idiosyncratic utterances compared with those utterances in the target language. It gives attention only to the

surface properties of the learner utterances without trying to identify the sources of the errors. This stage includes also a quantification of the types of errors. This is of great importance mainly for pedagogical application since it demonstrates which errors are the most frequent and which need more attention. According to him, many researchers argue the need for descriptive taxonomies of errors. There are several types and probably the simplest and the most traditional one is the descriptive taxonomy that is based on linguistic categories which in their turn are subdivided into subcategories. An example of this type is the auxiliary system which is subdivided into do, have and be. Another description of errors is based on more general categories; namely morphology, syntax and vocabulary. According to Spillner (2017), errors should be classified and grouped in categories. These groups can be syntax, lexical errors, orthography and pronunciation; which means that the analysis and classification is according to linguistic criteria. Error classification is used as a tool for error statistics for every point. This is of great use in determining the main weaknesses and problems and whether there is a correlation between the errors and class materials or group of learners (Spillner, 2017, P. 15).

An alternative to linguistic description is surface strategy taxonomy suggested by Dulay et al (1982), in which four broad categories are suggested; omissions, additions, misformation and misordering. The following table illustrates this descriptive taxonomy.

Category	Description	Example
Omissions	The absence of an item that must appear in a well-formed utterance.	She sleeping.
Additions	The presence of an item that must not appear in well-formed utterances.	We didn't went there.
Misformations	The use of the wrong form of the morpheme or structure.	The dog ated the chicken.
Misorderings	The incorrect placement of a morpheme or group of morphemes in an utterance.	What daddy is doing?

Table 2.1. A surface strategy taxonomy of errors (categories and examples taken from Dulay, Burt, and Krashen 1982) (as cited in Ellis, 1994, P. 56)

According to the table above, ***omission*** is characterized by the missing of an item that must exist in a well-constructed utterance as in the example above: (She sleeping). The auxiliary '***is***' is omitted when it is an item that must exist to have a well-constructed utterance (She '***is***' sleeping).

Addition category is characterized by the occurrence of an item that must not exist in a well-formed utterance. Dulay, Burt and Krashen (1982, as cited in Habibullah, 2010) give three subtypes of addition errors, namely double marking, regularization and simple addition.

- ***Double marking*** is the failure to delete certain items that are doubled, as in: (They ***did not   wrote.).*** There are two verbs in the past tense in the sentence. To get a well-structured sentence, it should be written: (They *did* not ***write.)***

- ***Regularization*** is to extend a rule to other items which require the application of another rule. In other words, it is characterized by "*the presence of a marker that typically added to a linguistic item, to exceptional linguistic items that do not take a marker*" (Masruddin and Karmila, 2018, p. 126). It is in the same class of linguistic items, such as the class of main verbs or the class of noun. (e.g. using a regular marker '***ed***' instead of an irregular one, as in **writed** for **wrote**).

- If an addition error is not categorized as a double marking or regularization, it is therefore a ***simple addition***.

According to ***misformation***, incorrect forms of morphemes or structures are used instead of the correct ones. In such category, there are three other subtypes: regularization, archi-forms and alternating forms.

- ***Regularization***, which is considered as a subcategory under *addition* can be classified as misformation errors type since they occur when "*a regular one places an irregular marker, as in **singed** for **sang** or **mouses** for **mice***" (Masruddin and Karmila, 2018, p. 126).

- *Arch-forms* category is characterized by the use of one member of a class of forms to represent others in the class as the confusion in the use of ***who*** and ***whom***.

- ***alternating forms*** type is noticed by the use of a various member of a class with each other as the confusion in the use of prepositions

(Masruddin and Karmila, 2018, 127).

Misordering errors are those in which a morpheme or group of morphemes are incorrectly placed in an utterance.

Another description of errors is the one suggested by James (2010) who categorizes errors into *omission, over inclusion, misselection, disorder* and *blend*.

1) Omission, where some elements of a word are omitted which should be present.

2) Overinclusion, where some element is present which should not be there.

3) Misselection, where the wrong item has been chosen in place of the right one.

4) Disorder, where the elements presented are correct but wrongly sequenced.

5) Blend, where there is not just one clear target, but two.

(James, 2010, as cited in Masruddin and Karmila, 2018, 127).

Depending on the classification above, errors can be categorized as errors of ***omission*** for the absence of necessary items, errors of ***addition*** for adding unnecessary items, ***misformation*** for incorrect forms of morpheme or structure, ***misselection*** for the wrong selection of items, ***misordering*** for the wrong order of the elements of an utterance and ***blends*** for the use of two forms at the same time because of uncertainty in deciding which one is correct.

Following the linguistic descriptions mentioned above, Ambridge et al.'s (2006) suggest their coding scheme to study errors in forming *wh*-questions. Hence, incorrect questions were further coded into four categories:

- **Subject-auxiliary inversion errors** (non-inversion in main questions and inversion in embedded questions.

- **Double tense/ double auxiliary errors.**

- **Omitted auxiliary errors** or errors that, due to lack of morphology, were ambiguous between non-inversion errors and omitted auxiliary errors.

- **Other errors.** Other errors included:
  - questions that differed in type from the target (yes/no instead of *wh*-questions, and vice versa);
  - subject *wh*-questions instead of object *wh*-questions;
  - productions that differed from the target in the lexical items used;
  - questions with VP movement;
  - questions where the *wh*- word differed from the target one. etc.

(as cited in Pozzan, 2011, p. 29)

However, it may be sometimes difficult and confusing to determine the type of the error. Consequently, it depends on the researcher's reconstruction of the sentence to identify the error type.

2.2.5.4. Explanation of Errors

The fourth step refers to establishing the sources of errors. An important stage in error analysis procedures is identifying the sources of errors. Several studies have been conducted to suggest different reasons why errors occur. In this vein, Taylor (1986) identifies some error sources that may be psycholinguistic, sociolinguistic, epistemic (lack of world knowledge), or in discourse structure (problems in information organization) (as cited in Ellis, 1994, p. 57). However, researches have been related to the first of these. The psycholinguistic sources of errors are related to the processing mechanisms involved in L2 use and the nature of the L2 knowledge system (Masruddin and Karmila, 2018, 127).

Mourssi (2013, P. 250) claims that the learners' errors may be seen as a result of different processes which traditionally have considered to involve a mother tongue and a target language. Many researchers generally differentiated three sources of errors. First, interference errors result from the native language. Second, intralingual errors reflect the general characteristics of rule learning in the target language. Third, developmental errors occur during the process of building hypothesis about the target language.

According to Spillner (2017, P. 15), errors have many different causes which may be external or internal. External causes can be stress, noise and lack of time may lead examinees to make errors. Errors can be also caused by poorly organized teaching materials and teaching method. Errors can be the result of internal sources such as language-related error causes, errors caused by the second language L2 system and interference errors through incorrect transfer.

However, it is not easy to identify the real sources of errors, but an attempt to understand the errors and to use what is learned from them and from the learners' explanations themselves can help to improve language learning since *"if clear explanatory statements about errors are often not possible, the value of EA as a tool for investigatingL2acquisitionis thrown into question"* (Ellis, 1994, p. 63).

2.2.5.5. Evaluating Errors

The last step is evaluating errors through finding out the most frequent errors made by the learners for the purpose of setting remedial instruction. According to Masruddin and Karmila (2018, P. 127), error analysis involves determining the gravity of different errors intending to decide which ones should receive instruction.

Planning for an error evaluation study involves the following steps:

a) Select the error to be evaluated.

b) Decide the criterion of which the errors are to be judged. The most commonly chosen criterion is "gravity" (seriousness).

c) Prepare the error evaluation criterion. This will consist of a set of instructions, the erroneous sentences or text, and a method for evaluating the errors.

d) Choose the judges. It is best to have at least two as this increase the reliability and generalize ability of the result.

According to Dodigovic (2005), many researchers were elaborated on Corder' s model such as Brown (1994) and Ellis (1995). Some of them provided clear examples of how to conduct the study such as Hubbard et al (1996) and Ellis (1997). However, Gass and Selinker (1994) identified six steps followed in conducting an error analysis; collecting data, identifying errors, classifying errors, quantifying errors, analyzing source of error and remediating for errors (as cited in AbiSamra, 2003). Another model was proposed by While Sridhar (1980) that includes six steps. They are collection of data from composition or Exam answers, identification of errors with respect to the exact nature of the deviation, classification into error types, statement of relative frequency of error type, identification of areas of difficulty in the target language and finally therapy with remedial drills and lessons (as cited in Hourani, 2008).

The major aim of error analysis is to improve foreign language learning through pointing at the main areas of difficulties. In this respect, Corder (1974) claims that systematically analyzing errors made by language learners makes it possible to determine areas that need reinforcement in teaching (as cited in AbiSamra, 2003). However, for setting appropriate remedies, it is essential to identify the main sources of committing errors.

2.2.6. Sources of Errors

An important stage in error analysis procedures is identifying the sources of errors. Several studies have been conducted to suggest different reasons why errors occur, in which the one done by Richards (1971) may be the first and most important (Heydari and Bagheri, 2012). According to them, he differentiated three sources of errors. First, interference errors result from the use of elements from the native language when speaking or writing another. Second, intralingual errors reflect the general characteristics of rule learning such as

overgeneralization of rules, incomplete application of rules, ignorance of rule restrictions and false hypothesis. Third, developmental errors occur during the process of building hypothesis about the target language. However, the distinction between intralingual errors and developmental errors seems to be unclear (Schacheter and Celce-Murcia, 1977, as cited in Ellis, 1994). Accordingly, Richards (1974) classifies errors according to their sources into two categories: interlingual errors caused by mother tongue interference and intralingual and developmental errors caused during the process of second language learning or caused because the difficulty of the language itself (as cited in Heydari and Bagheri, 2012).

It is not easy to make differences between interlingual and intralingual errors. Furthermore, it is more difficult to make a difference between the different types of intralingual errors. As a result, other experts proposed other categories of learners' errors (Ellis, 1994). There are other models that are suggested by Hourani (2008) such as the following. Dulay and Burt (1974) classified them into three categories; developmental errors that are similar to L1 acquisition, interference errors that reflect the structures of L1 and unique errors that are neither developmental nor interference. As it has been mentioned earlier, Spillner (2017) claims that errors can be the result of internal sources such as language-related error causes, errors caused by the second language L2 system and interference errors through incorrect transfer., In each language there are particular system-related difficulties. The relationship between written and spoken forms is a particularly problematic area. "*Such Language-specific structural problems must be recognized as potential error causes in foreign - language teaching. They are, however, generally independent of the learner's first language and can therefore not be treated as contrastive*" (Spillner, 2017, P. 16). However, during foreign language acquisition and practice, learners make errors which often have an interlingual root, "*The learner is subconsciously aware of mother –tongue structures and transfers these, sometimes incorrectly, to the target language*" Spillner, 2017, P. 16). Stenson (1974) proposed another category, induced errors that are due to the incorrect instruction of the language and others added two distinct categories: context of learning and communication strategies (Ellis, 1994). Selinker (1992, P. 37) identifies five sources of errors:

1. *language transfer* which is referred to as L1 interference; that means that the learner transfers the rules of his mother tongue to the target language.
2. *Overgeneralization* occurs when the learner overgeneralizes rules of the target language in a context where it does not fit.

3. *Strategies of second language communication* refers to errors arising when the learner fails to make use of the target-like form of the target language rules while he tries to communicate with the native speaker.

4. *Transfer of training* refers to errors resulted from teaching situations.

5. *Strategies of second language learning* refers to errors made when the learner simplifies the target language rules to easier but not target-like ones.

(As cited in Mourssi, 2013, P. 250)

However, Brown (2007) states that causes of errors are:

1- *Interlingual transfer* which deals with the interference of native language in learning the second language (i.e. the learner depends on the linguistic system of his native language before being familiar with the new one).

2- *Intralingual transfer* which is manifested when learners have started to acquire parts of the new system (i.e. the learners start to generalizes a rule with in the target language).

3- *Context of learning* refers to errors resulted from the explanation that misleads them. This can be because of the teacher, faulty presentation in the textbook, or improper context of learning.

4- *Communication strategies* that are related to learners' learning styles which become the source of errors

(as cited in Masruddin and Karmila, 2018, P. 128)

According to Cowan (2008), there are four sources of grammatical errors; performance errors, imperfect learning, overgeneralization and influence of the native language. *Performance errors* are made not because of lack of knowledge of the grammatical rules but as an indication of the process in the act of speaking or writing. *Imperfect learning* means that a rule or its restriction has not internalized by the learner. *Overgeneralization* occurs when the learner applies a grammar rule to forms that do not take it. *Influence of the native language* manifests in the application of grammar rules from the native language. Indeed, most researchers based their classification of categories on Richards' division and they elaborated their own classifications (Heydari and Bagheri, 2012).

However, it is not easy to identify the real sources of errors, but an attempt to understand the errors and use what is learned from them and from the learners' explanations themselves can help to improve language learning. Furthermore, previous studies mainly with similar learners can help a lot to conduct error analysis with particular groups.

As it has been mentioned above, error analysis helps in facilitating second language learning through improving language competence. It has been proved that it is an effective means to improve grammatical accuracy. In this way, it plays an important role in helping both teachers and pupils to construct correction techniques. Hence, error analysis is one of the most beneficial tools that have proved its usefulness and efficiency in educational diagnostic assessment. The results of diagnostic tests coupled with error analysis can be successfully used in planning the suitable remedial teaching and in making appropriate instructional decisions.

This research is limited to exploring the difficulties in forming questions as a case study trying to apply what has been already dealt with in the literature review. The choice of such point of grammar for study was due to some reasons that will be mentioned later. Therefore, an attempt to provide a general overview of the theoretical background of the problem under study has been made.

2.3. Acquisition of *WH*-Questions literature review

This study is restricted to exploring the difficulties in forming questions as a case study. It investigated questions concerning common difficulties that high school pupils experience when forming wh-questions, the possible reasons for these difficulties and the ways in which teachers can help those learners overcome these difficulties. This study is restricted to such grammar point as one of the most important aspects of grammar in any language mainly English.

In general, asking questions is very important in life. Questioning opens minds to other facts, opinions and beliefs. It leads researchers and scientists to discover and create new things. Moreover, communication develops into a longer conversation with the combination of questions either yes/no questions or wh-questions. That's why, "*for communication competence, an individual must be able to ask as well as to comprehend questions and, thus, be able to respond to questions*" (Heidinger, 1984, p. 90).

In any language and especially in the field of education, asking good questions is beneficial in countless ways. It develops in learners critical thinking skills, encourages active and effective participation and rises their motivation. It also helps teachers to assess the effectiveness of their own teaching. Hence, question is considered as one of the most essential aspects that students need to master not only in speaking but also in writing since asking questions is an effective tool for learning. Another reason for its choice is that it presents a

serious difficulty for the target learners as many Arab EFL learners. This is what has been noticed in our previous research.

Therefore, an attempt to provide an overall review of the theoretical background of the issues related to the topic has been made, starting with types of *wh-* questions with a special focus on *wh-* information questions.

2.3.1. Types of Wh- Questions.

No matter what the subject is, learners necessitate the ability to form interrogative sentences correctly to learn. In an English classroom, questioning is of great importance as it draws the learners' interests and raises the chance of their English learning. However, there are several types of questions that learners need to learn.

According to Cowan (2008), there are four basic types of questions in English: *yes/no* questions, *tag* questions, *wh-* questions and miscellaneous question forms that have common features with the previous ones. *Yes/no* questions can be answered with a *yes* or *no*. *Tag* questions consist of a *tag*, which is a short question form, attached to a statement. *Wh-* questions are formed with an interrogative word (who, where, when, why, whom, what, how, which, whose) with the necessary changes in the structure. *Yes/no* questions and w*h-* questions are the most widely used types of questions. The difference between them is that in the former the whole proposition is being questioned however only *"a specific constituent constituents in the underlying sentence are being questioned in wh-questions, that is, the speaker/writer is asking the listener/reader to fill in an information gap in a given sentence"* (Celce-Murcia and Larsen-Freeman, 1986, p. 147 as cited in Jiang, 2009, P. 155)

Depending on the case under study in the current research, special focus has been put on forming wh- questions. *Wh-* questions can be categorized according to the purposes they serve for the person who asks the question into three main types: *information* questions, *repeat please* questions and *elaborate please* questions (Cowan, 2008, p. 72).

Wh- information questions, which are the basic type, are used to ask for information that has not been previously mentioned. According to Heidinger (1984, p. 96), wh-question is asked for seeking for "*specific information, such as identification of a person; a location; the time; duration; or frequency of an activity; a reason; a recounting of events; or even a full set of directions as to how to do something.*". This type of questions always contains a presupposition, which means that whenever the question is asked, there is a presumed information as shown in the following examples:

Questions	*Presumed Information*
- *How* did they do it?	- They did it *somehow*.
- *Where* did John go?	- John went *somewhere*
- *Whose* book was stolen?	- *Someone's* book was stolen.
- *What* has he done?	- He has done *something*.
- *Who* is doing it?	- *Someone* is doing it

(Cowan, 2008, p. 73)

***Repeat please* questions** are often used when the asker either did not hear or understand what was said to him or found it difficult to accept it. They serve as a request for verification with the use of greater degree of stress and rising intonation on the wh-word. However, ***elaborate please* questions** are often used to get more information about what has been said. They can be long or short as in the examples below.

- **Sandra:** We lived for over a year <u>**in France.**</u>
- **Joan: a-** <u>**Where**</u> in France?

     b- <u>**Where?**</u>

There is also another type of wh- questions, which is **embedded wh-questions.** They are called so because the question is embedded inside a larger sentence and do not require subject- auxiliary inversion or do inversion, as in the following example:

- I' m not sure <u>**what the professor's name is**</u>. **(Embedded *wh*-question)**
- <u>**What**</u> is the professor's name**? (Regular *wh*-question)**

Other types of *wh*-questions categorized under the third type are mentioned by Cowan (2008, p. 75). These questions serve specific functions and their names reflect those functions. They are alternative questions, echo questions, exclamatory questions, rhetorical questions and display questions.

- *Alternative* **questions** offer at least two alternative answers.
     * <u>**Which color**</u> do you like best? *Yellow* or *orange*?
- *Echo* **questions** repeat all or part of what has just been said. Its function can be to confirm a previous utterance or requesting for clarification.
- *Rhetorical* **questions** are not intended to elicit a reply but to express the asker's opinion.
     * Guess what? Andrew and Fergie split up.
     * Who cares? (Implication: I don't care.)

- *Display* **questions** are often used by teachers to ask their students to display knowledge about something. In this type of questions, the *wh*-word comes at the end of the question or before a noun phrase at the end.

    * So this play is about **what**?

    * So this book deals with **what** important issue?

Other researchers highlight the difference between two other types of *wh*-questions. According to Lee (2015), questioning had the greatest impact on how students think in an English classroom which eventually would develop higher order thinking skills. Questions can be divided into two categories; higher order questions in which the response would need the skills for analysis, synthesis and evaluation, and lower order questions in which the response would be information about general knowledge, comprehension or practicing an application (as cited in Silalahi, 2017, P. 155).

As there are several types of questions, there are also different functions that questions can serve. Questions can perform a lot of other functions such as to suggest, to criticize, to request and so on**.** Depending on the case under study in the current research, among the types mentioned previously this research work interested in the ability to form ***Wh- information questions.***

2.3.2. Forming Wh- Questions in English

Forming questions in English is characterized by some aspects as movement and inversion. A characteristic aspect of questions in English is the movement of auxiliary and the Wh-word. Another relevant aspect of the use of the question word in English is that it occurs in the initial position of the sentence and that they are followed by the subject - auxiliary inversion, except in the case of asking about the subject in the sentence in which there is no need for the subject- auxiliary inversion. In general, there is a strict order of words in which wh-questions should be formed (*wh*-word + an auxiliary verb / modal verb + subject + main verb). However, the auxiliary verb should go in accordance with the subject and tense of the sentence. Forming wh-questions in English can be explained briefly under these types; *wh*-questions with inversion, wh-questions without inversion, wh-questions with do-support, wh-questions with prepositions (Heidinger, 1984).

The different forms of *wh*- questions that are going to be mentioned, are based on Cowan (2008). Cowan (2008) points out that in a declarative sentence there are various constituents that can be questioned with a *wh*- question. *Wh*- questions are formed with

interrogative words (who, where, when, why, whom, what, how, which, whose) with the necessary changes in the structure of the rest of the sentence. These changes differ in terms of the sentence structure and the constituent that the wh-word replaces. They can be explained briefly under these types; wh-questions with inversion, wh-questions without inversion, wh-questions with do-support, wh-questions with prepositions.

If the sentence contains an auxiliary verb, a modal verb, or copula *be*, two necessary rules are necessary to be applied: *wh- movement* and *subject- auxiliary inversion* (Cowan, 2008) as in the following example:

- Liz is watching **a film**.
- **What** *is* Liz *watching*?
- Mr. John has taught **English** for 13 years.
- **What** *has* Mr. John *taught* for 13 years?
- She *Will go* to London **next week.**
- **When** *will she go* to London?
- Liz is **at home.**
- **Where** *is* Liz?

Collins (1990) points out that if 'be' is the main verb in the sentence it functions as an operator and it is placed before the subject to form questions (as cited in Umale, 2011, p. 95). These are some examples:

- He *is* **a teacher**.
- **What** *is* he?

If the sentence does not contain an auxiliary verb, a modal verb, or copula *be,* interrogative word is placed at the initial position of the sentence followed by *do* insertion (either '*do'*, *'does'* or '*did'*) and a change of the verb into the infinitive form as shown in this example:

- Razane *wrote* **a letter.**
- **What** *did* Razane *write*?

These are the steps that should be followed to produce grammatically correct questions except in some cases which are going to be mentioned next. The following example, which is about asking *wh-* question about an object, is taken as a sample, what is changed is the *wh-* word.

- Liz is writing a letter.   *Declarative sentence*
  - A letter → what   - a letter is converted to what

- Liz is writing **what**?

- **What** Liz is writing?	- Wh- movement
What *is* Liz *writing***?**	- Subject-aux inversion

In the declarative sentence above, the object '*a letter*' is questioned and the sentence contains the auxiliary verb *'is'*. So, the *wh*-word that is required for this question is '***what';*** the object *'a letter' is converted into 'what'*. The first rule that comes into play here is the *wh-word movement* to the front of the question and the second one is the subject –aux inversion in which the auxiliary verb 'is' is placed before the subject as in this form:

* Wh-word + auxiliary verb + subject+ verb stem…? (adapted from Cowan, 2008).

If similar sentence does not contain an auxiliary verb or a modal, 'to do' is inserted in the right tense according to the tense of the verb, but following the same steps of *wh-movement* and *subject –aux inversion.*

- Razane *wrote* **a letter**.	- *Declarative sentence*
- A letter → what	- a letter is converted into **what**.
- Razane wrote **what**?	-
- **What** Razane *wrote*?	- Wh- movement.
- **What** *did* Razane *write*?	- *Do* insertion, *wrote* becomes *write*.

(adapted from Cowan, 2008)

If the subject in the sentence is questioned, it is converted into the appropriate *wh*-word (either *who* or *what*) and the sentence is let as it is. These examples are illustrations of this type of questions.

- **James** did a good work.
- **Who** did a good work?
- **Bribery** has become a global phenomenon.
- **What** has become a global phenomenon?

How is used with adjectives and adverbs to form questions such as how long, how many, how often and so on (Cowan, 2008), as illustrated in the following examples:

- **How many** pupils are there in the class?
- **How long** did the debate last?

***Wh*- information questions** in English are questions used to seek for specific information. They are also known as *"wh-interrogatives, information-seeking questions and*

content questions" (Addaibani, 2017, p. 18). *Wh*-questions are called so because they are asked with the use of interrogative words at the beginning of the sentence. *Wh-* words are *what, where, when, why, who(m), whose, which* and *how. How* does not start with '*wh'* but it is considered as a *wh*-word since it exhibits the same syntactic behavior as the other *wh*-words (Zhang, 2016). Azar (1999, A8) wrote forms of yes/no questions and information questions, and the different *wh*-words with their main uses in a table in details with some illustrating examples as mentioned in Nurjanah et al (2017). The following table displays the interrogative words and their different uses with some examples. It is adapted from the already mentioned table.

Question words	Questions	Answers	Uses
When	- **When** *did they arrive?* - **When** *will you come?*	-yesterday. -next month.	**When** is used to ask questions about ***time.***
Where	- **Where** is she? - **Where** can I find it?	- at home. - in the drawer.	**Where** is used to ask questions about ***place.***
Why	- **Why** did he leave early?	-because he is ill.	**When** is used to ask questions about ***time.***
How	- **How** did you come to school? - **How** are you?	- by bus. - fine. Thanks.	**How** are used to ask questions about ***manner*** or ***condition***
	- **How much** does it cost? - **How many** people are there?	- Ten dollars. -Fifteen.	**How** is used with ***many*** and ***much***
	- **How old** are you? - **How cold** is it? - **How soon** can you get here? - **How fast** were you driving?	- Fifteen. -Ten below zero. -In 10 minutes. - 50 miles an hour.	- **How** is used with ***adjectives*** and ***adverbs.***
	- **How long** has he been here? -**How often** do you write homework? - **How far** is it to Miami from here?	- two years. - Every week. - 500 miles.	- **How long** asks about ***length of time***. - **How often** asks about ***frequency***. - **How far** asks about ***distance.***

	- *How deep* is the valley? -*How high* is Mount Everest? - *How wide* is the valley?	-07metres. -8,872 metres. -30 metres.	How is used to ask about *size* and *dimensions.*
Who	-*Who* can do this? -*Who* came to see you?	-I can. - Jane.	*Who* is used as *the subject* of a question. It refers to *people.*
	-Who is coming to dinner tonight?	- Ann, Bob and Jane.	*Who* is usually followed by *a singular verb* even if the speaker is asking about *more than one person.*
Whom	- *Who(m)* did you see? - *Who(m)* are you visiting? - *Who(m)* should I talk *to?* -*To whom* should I talk? *(formal)*	- I saw George. - My relatives. -The secretary.	- *Whom* is used as *the object* of a verb or preposition. In everyday *spoken English whom* is *rarely used*; *who* is used instead. *Whom* is used only in *formal questions.* *Note: whom*, not who, is used if *preceded by a preposition.*
Whose	- *Whose* pen is this? - *Whose* is this?	-David's. - It's mine.	**Whose** asks questions about **possession**
What	- *What* made you angry? - *What* went wrong?	-His rudeness. -Everything.	*What* is used as the *subject* of a question. It refers to *things*.
	-*What* do you need? -*What* did he talk *about*? -*About what* did he talk?(formal)	- A pencil. - His vacation.	*What* is also used to ask about *object.*
	-*What did* you *do* last night? -*What is* she *doing*?	- I studied. -She's reading a book.	*What* + a form of *do* is used to ask questions about *activities.*

	-*What kind* of shoes did she buy?	- Sandals.	*What kind of* asks about the *particular variety or type of something*.
	-*What countries* did you visit? - *What color* is her hair?	- Italy and Spain. - Brown.	*What* may accompany a noun.
	-*What is* the weather *like*? - *What is* James *like*?	- Hot and humid. - He is friendly and kind.	*What + be like* asks for a general description of qualities.
	-*What* does James *look like*? -*What* does her house *look like?*	- He is tall and strong with dark hair. - It is a two story, red brick house.	*What + look like* asks for a physical description.
Which	-*Which* pen do you want? -*Which* do you want?	- The red one. - That one.	*Which* is used instead of *what* when a question concerns *choosing from a definite, known quantity or group.*
	- *Which* countries did he visit? - *What* countries did he visit?	- Peru and Chile.	In some cases There is little difference in meaning between *which* and *what* when they accompany a noun.

Table 2.2*. The Interrogative Words and their Different Uses (adapted from Azar (1999: A8), as cited in Nurjanah et al (2017))*

As the present study attempts to examine and discuss problems that EFL learners encounter when constructing wh-questions in English, it is worthwhile to refer to their native language as one of the main sources of such difficulties. For this purpose, it is essential to study the differences and the similarities in forming such type of questions in English and

Arabic. The previous point dealt with the main aspects of forming wh-questions in English. However, the following step intends to discuss some aspects of forming questions in Arabic in an attempt to pinpoint the main differences in the two languages and their possible effects in the occurrence of errors.

2.3.3. Forming Wh- Questions in Arabic.

In the field of education, asking good questions is beneficial in countless ways. El-Mekhlafi (2013) points that *wh-* information question in English is known in Arabic as *'istifham at-taswir'* and this Arabic information question is formed by the use of an interrogative pronoun known as *'ism istifham'*.

The interrogative pronouns used to form questions in Arabic are as follows with their equivalents in English:

Interrogatives in Arabic	Interrogatives in English	Interrogativesin Arabic	Interrogatives in English
ma/madha	What	kayfa	How
man	who	limadha	Why
man	whom	mata	When
ayna	where	ayyi	Which

Table 2.3. The interrogatives in Arabic.

Forming questions in Arabic is characterized by some aspects which are similar to questioning in English. A similar characteristic aspect of questions in Arabic with English is the movement of the Wh-word (the interrogative pronoun) to the initial position of the sentence. In standard Arabic, the interrogatives have the property of fronting; they are placed at the beginning of the interrogative sentence (Comrie, 1987, p. 683, as cited in Umale, 2011, p. 98). These are some examples.

- ***Ayana*** dhahaba Omar?   -   Where did Omar go?
- ***Keifa*** halek?   -   How are you?
- ***Mata*** satoghadire lmadina?   -   When will you leave the town?

Another similar relevant aspect is that which is in the case of asking about the subject in the sentence in which there is no need for the subject- auxiliary inversion in English. It resembles asking question about the subject in Arabic as shown in this sentence.

- Dhahaba ***Mohamed*** ila elmasjidi bilames.
- ***Man*** Dhahaba ila elmasjidi bilames?

- _**Who**_ went to the mosque yesterday?

However, there are many other aspects which are totally different from questioning in English. Before dealing with that, it is worth mentioning that in a declarative sentence in Arabic, the verb precedes the subject as shown in the following example:

- Dhahaba Mohamed ila elmasjidi bilames.
- Went Mohamed to the mosque yesterday.

Construction of wh- questions in English can be categorized under different types of questions. However, in Arabic, it is explained under one type; what is changed is just the interrogative pronoun.

Wh- questions in Arabic can be formed by adding the wh- word (the interrogative pronoun) at the beginning followed by a declarative sentence without changing or adding anything. In these sentences, there are no primary auxiliaries or modal verbs like *'be', 'have'* and *'do'* (Smith (1987), in Swan and Smith 1987, as cited in Umale, p.98). This can be illustrated in forming the following questions:

- _**Ayna**_ dhahaba Mohamed bilames?
- _**Where**_ went Mohamed yesterday?
- _**Mata**_ dhahaba Mohamed ila elmasjidi?
- _**When**_ went Mohamed to the mosque?

As it is noticed above, in forming questions in Arabic, there is no subject - auxiliary inversion or do support as in English (Al-Mekhlafi, 1999; Faynan,1999 and Umale, 2011, as cited in Al-Mekhlafi, 2013). And since there are no primary auxiliaries or modal verbs in Arabic, most of Arab learners are expected to face difficulties in inserting the right auxiliary verb (Al-Mekhlafi, 2013) since.

From this point, it is noticed that there are many differences between the structure of the English interrogative sentence and the Arabic one. That's why, most of Arab learners face difficulties in forming wh- questions. Before the attempt to pinpoint those problems, it is of a paramount importance to have a look at related previous studies.

2.3.4. Previous Studies on Wh- Questions

Having a look at related previous studies is an essential part of any investigation. It helps a lot in the planning of the study by using the content from the past literature for the new study and the newly obtained data. This permits to have insights into the statistical

methods through which validity of the results is to be established (Kumar, 2012). In this way and in such study, previous studies mainly with similar learners can help a lot to conduct error analysis with particular groups.

According to Pozzan (2011), the acquisition of questions in English mainly yes/ no questions and *wh-* questions has received considerable attention in the L2 literature. Some studies claim that learners might transfer their first language properties to their production of English questions (Zobl's (1979, 1995) and Spada and Lightbown's (1999)). However, many other researchers propose that EFL learners, regardless to their native language, go through a number of ordered stages in their acquisition of main questions such as Pienemann, Johnston and Brindley (1988) (as cited in Cowan, 2008, p. 43). In this way, errors committed among EFL learners reflect either L1 transfer or imperfect learning in which they overgeneralize rules or apply them incorrectly. The following table is an illustration of that.

Stage	Question type	Example	Description
1	Single words or fragments with rising intonation	What? A ball or a shoe?	Questions are formed by adding rising intonation to single words.
2	*Wh-* fronting	-Who **does** answer that question? **What** you like?	Questions are formed by adding a clause-initial interrogative constituent (*do* or *wh-* word)
3	Yes-no inversion Copula inversion	Have you seen it? Where is my pen? What you want?	Subject-auxiliary inversion in yes-no questions is acquired, while only copula inversion is in place in *wh-* questions and *do* support is absent..
4	subject-auxiliary inversion	Why did he leave?	Subject-auxiliary inversion is fully acquired.

Table 2.4. Stages in L2 Acquisition of English Wh-questions (adapted from Pozzan, 2011, p. 47)

Errors shown in stages 2 and 3 are common among EFL learners and they reflect imperfect learning.

EFL learners, being Arab learners or not, face several difficulties to master such grammar point. To explore the most common errors that learners of English as a foreign language commit when constructing questions, several studies have been conducted. Some of these studies were carried out with Arab EFL learners and others with Non-Arab EFL

learners. A summary and short presentation of the works available in the related topic are presented under the following headings.

2.3.4.1. Studies with Non- Arab EFL Learners

There have been several researches about the difficulties of asking wh-questions in English among Non-Arab learners of English as a foreign language. These can be traced in the works of many researchers such as Lee (2012) and in the works of Qian (2015), Youn & Meng (2015), Kumar (2016), which are mentioned in the study of Silalahi (2017), and Masruddin and Karmila (2018) who also presented some of them such as Irfaniah (2014) and Sari (2013).

Lee. J.F.K (2012) in her research entitled 'Teaching Hong Kong L2 Learners Wh-Questions- Using A Learning Study Approach' investigated Hong Kong ESL learners' difficulties with wh-questions formation for the purpose of exploring effective strategies to enhance the instruction. She found that Hong Kong learners encountered problems in their learning of English wh- interrogatives as a result of L1 interference. The most serious errors that they made were wrong word order and failure to use correct verb phrase structures (Silalahi, 2017).

Qian (2015) in his research, focused on the importance of the presence of questions in English classrooms to talk and communicate more rather than yes- no questions which do not encourage them to think and talk longer. According to him, involving students in discussions in which they use questions could be a helpful solution to improve the students' abilities to apply questions for meaningful communication (Silalahi, 2017).

Youn & Meng (2015) distinguished between the syntactic difference between English and Mandarin. In their research, they found that interrogative sentences in English had a very different format to Mandarin specially in the aspect of subject- auxiliary inversion (Silalahi, 2017).

Kumar (2016) conducted a study in which he revealed that Indian students also tended to make similar errors like Indonesian students when formulating questions. These errors are presented in the use of inappropriate question word, missing verbs and wrong word order. To overcome such difficulty and have the ability to form interrogative questions correctly, he strongly suggested for schools to use songs in the English classrooms as songs are highly motivating, attractive, unforgettable and staying longer in the learners 'minds (Silalahi, 2017).

Silalahi (2017) conducted a study in which she investigated the most common mistakes university students made when formulating interrogative sentences. The research was carried out with 60 students from one of the universities in Indonesia. The findings showed that the most common mistakes made by those learners were about choosing the right wh-question words to form the question and to place the question components in the right order. The researcher mentioned other mistakes such the wrong use of articles, demonstratives, verbs and auxiliary verbs.

Masruddin and Karmila (2018) carried out a research with 28 EFL learners in Indonesia. Depending on the analysis of the obtained data, the most common errors committed when forming wh-questions were omission, simple addition, arch-form, alternating form, misordering and misselection.

There have been some researchers carried out researches related to the students' errors in constructing wh-questions. Masruddin and Karmila (2018, pp. 124-125) mentioned some of them which are as follows.

Irfaniah (2014) carried out a research entitled "An Error Analysis in Making WH-Questions (A Case Study of the Second Year Students of SMP Islam Al-Syrukro Universal)". The results showed that 29.5 % of the total number of errors were archi-form of question words,22.4 % of them were helping verb omissions, 20.5 % were archi-form of the verb and only 8.2 % were errors of helping verb misordering. The causes of those errors were related to interlingual transfer and intralingual transfer (Masruddin and Karmila, 2018, p. 124).

Sari (2013) in her research, with students at the eighth grade of SMP Negeri 1 Gunung Jati, found that the students did not put the wh- word in the initial position of the sentence but in the middle and most of them did not know about grammar.

In their book entitled *'Research Mosaics of language studies in Asia: Differences and Diversity',* Salasiah Che Lah and Rita Abdul Rahman Ramakrishna (2019) published some studies which were a selection of articles from the Second International Conference on Linguistics, Literature and Culture (ICLLIC). Among them, **Tan Swee Mee, Chan Eik Yien and Lee Jai Ye** present a study on question formation*'An Analysis of Enquiry Questions Formed by Malaysian Undergraduate Students'.* They examine three areas in question construction: types of questions, linguistic features and grammatical errors in a formal setting where 72 Malaysian Chinese undergraduates made enquiry in a private university. The categorization of questions was based on the different stages of language acquisition sequence in terms of forming questions. The findings show that the most questions were formed in

declarative word order with no inversion or fronting rules, which is stage two in the sequence and the most common errors were errors of misinformation.

Ting, Mahadhir and Chang (2010) conducted a study with 42 students at a Malaysian University. They investigated grammatical errors among them through spoken interactions in the English class. The findings show that incorrect questions are one the most common errors made by the learners besides preposition, articles, plural forms of nouns, subject-verb agreement and tense. Another significant result is that those learners modified the target forms by misinformation and omission more frequently than addition or misordering (Tan Swee Mee, Chan Eik Yien and Lee Jai Ye, as cited in Lah and Ramakrishna, 2019).

Youhanaee (2007) looked at Persian speakers' mastery of main and embedded questions in English. The participants were asked to translate 6 yes-no questions and 15 wh-questions. The most frequent errors were overgeneralization of inversion to subject wh-questions (e.g. what did cause the accident?), lack of inversion in non-subject wh-questions (e.g. when he played football?), and lack of wh-movement (e.g. did he bring flowers for whom?) (Pozan, 2011, p. 49).

As the present study was conducted with Arab learners as an attempt to examine and discuss problems that they encounter when constructing wh-questions in English, it is worthwhile to refer to the previous studies conducted with Arab EFL learners. For the purpose of studying the differences and the similarities in the findings of these researches and the current one.

2.3.4.2. Studies with Arab EFL Learners

English question formation constitutes a serious difficulty among the Arab learners of English as a foreign language as mentioned by Mukattash (1981), Al-Mekhlafi (1999), Umale (2011) (as cited in Al-Mekhlafi, 2013, p. 58). The difficulty of making grammatically- correct questions in English among Arab EFL learners has recently been dealt with by some researchers such as: Al-Mekhlafi MA (2013), Umale J (2011), Al-Hassaani, A. M.A (2016), MarziehGalbat and RoohollahMaleki (2014), Addaibani, A.A (2017)and many others.

Al-Mekhlafi, M. A.A (2013) conducted a research work in Sohar University in the Sultanate of Oman in 2010. The researcher analysed the writings of 46 English majors, in which he identified the most common errors the students made while forming questions. The analysis of the data suggested that the difficulties that Omani student teachers face while

forming questions are: auxiliary omission, auxiliary replacement, auxiliary subject agreement, verbal form concord, auxiliary subject inversion, auxiliary redundant, wrong question word and verb inverted. Another finding is that most of the errors were due to the syntactic difference between Arabic and English in forming questions.

Marzieh Galbat and Roohollah Maleki (2014) conducted a study in Iran with 102 Persian mono-lingual and Arabic-Persian bilingual learners of English. The study aimed at measuring the acquisition of forming wh-questions in English by second and third languages learners. The results showed no significant difference between the performance of the two types of learners (Addaibani, 2017, p. 20).

Al-Hassani, A.M.A (2016) investigated the problem of questions formations among Saudi EFL learners in Bisha university. The study took place in 2015 with 80 EFL learners from different levels of the English language department. The findings revealed that those learners lacked the necessary skills and practice in questions formation. The researcher studied the techniques used by the Saudi students at Bisha University in forming interrogative sentences in English as an important aspect in an English classroom. According to the researcher, questions are the corner-stone around which all interaction and activities between the teacher and his/her students take place at every stage of teaching. He referred the difficulty in forming question to the lack of knowledge of proper grammar rules to form the different types of questions and the intense interferences of their mother tongue. One of the major causes of such difficulties is that insufficient emphasis is given to question formation in the syllabus and the inadequacy of the materials, tasks, and the methodology used. In addition, the major sources behind such problem is lack of motivation and exposure to English among Saudi EFL learners.

Addaibani, A. A (2017) carried out a research in which he studied question formation errors made by EFL majors in Najran University –KSA. The data analysis has shown agreement with similar previous studies. The results showed that the most common error types in forming wh-questions are auxiliary omission, wrong question word, auxiliary- subject inversion, wrong auxiliary and many others. The main sources of such errors were lack of grammar competence for such grammar point and structure dissimilarities of the two languages.

Umale, J (2011) discussed the effects of consciousness raising on errors of Omani students in L2 question formation. According to that study, EFL learners commit errors as a result of the difference of the features of L1 and L2. By raising consciousness towards particular grammar features of L2, students can perceive the targeted features and form

internal representatives of them and in that way learning may be facilitated. A significant finding of that research was that consciousness raising had a positive effect on reducing the errors committed due to lack of ignorance of the rules of L2 question formation.

Depending on what have been mentioned above, the most common errors made by those learners are auxiliary problems such as omission, replacement or wrong forms, wrong question word, auxiliary- subject inversion and verb inverted. Concerning the main sources behind making such errors, most of researchers agree on the lack of grammar competence for such grammar structures andthe interferences of their mother tongue. Some of them refer the learners' grammar incompetence to poor teaching methodologies lacking of adequate tasks and materials, lack of motivation and exposure to English.

2.3.5.   Common Errors When Formulating *WH*-questions

EFL learners always make errors when trying to construct interrogative sentences. They can apply *wh-word movement,* but they are not able to form the rest of the question in the right structure. They can ignore where the auxiliary verb should be placed or what its form is or whether '*do'* should be inserted or not. They can also invert the subject and verb without '*do'* insertion. The worst problem can be a wrong decision about the suitable question word for the question. More specifically, students generally mixed up to use either who or whom to form a question about an object and there are so many types of errors.

In the same vein, Swan (1980, PP. 512-513 as cited in Silalahi, 2017) discussed some typical errors learners committed when formulating wh-questions. These typical errors were:

1. **Placing subject after the main verb and not after the auxiliary verb** as in the following examples:

   - When did go *you* there?

   - When did *you* go there?

2. **Missing auxiliary verb**

   e.g. - What √ they do?
   - What **did** they do?

3. **Using auxiliary verb when not needed after special wh- question 'who/what'.**

   e.g. - Who **does** answer that question?

        - Who answers that questions?

However, there are other common types of errors such as those shown by Cowan (2008). One of the most frequent is the inability to insert '*do*' either they **let the sentence as it is** such as shown in these examples:

- Why *you did* so?

- Whom *she gives* the letter?

Or **invert the subject and verb without applying *do insertion***. An example of this is shown below.

- When ***went James*** to school?

- What ***said Lynda***?

It is possible that the errors mentioned above are due to the native language interference as in the case of Arabic. Wh- questions can be formed by adding the wh- word (the interrogative pronoun) at the beginning followed by a declarative sentence without changing or adding anything however a typical declarative sentence in Arabic initiated by verb - subject order. This can be illustrated in forming the following questions:

- ***Ayna*** dhahaba Mohamed bilames?

- ***Where*** went Mohamed yesterday?

Moreover, because of the absence of auxiliary and modal verbs in questions in Arabic, forms like does, has, is and should are omitted in questions made by Arab learners.

In an other hand, a variety of ungrammatical questions that English language learners produce seems to be resulted from the influence of their native language. However, some deviant questions such as the absence of inversion of the auxiliary and the subject NP have presented in the questions produced by children whose native language is English **(**Mukattash,1981 , p. 269),and the same errors were made by different learners with different language backgrounds (Richards,1974, p. 187as cited in Mukattash, 1981 , p. 270).This can be explained by the fact that there is also a possibility of developmental sequences for the acquisition of English questions (Cowan, 2008). Many researchers propose that L2 learners, regardless to their native language, go through a number of ordered stages in their acquisition of *wh-* information questions. Some grammatical errors reflect a stage in that sequence in L2 learning of questions. The following example is an illustration of that even though it deals with yes-no question acquisition, because yes-no questions are already inclusive in the structure of wh-questions and both types are marked by subject-auxiliary inversion.

Pienemann, Johnston and Brindley (1988) identify four stages in which learners go through in attempt to produce yes/ no questions:

Stage 1: (Fragments or single words with raising intonation)

Speak English?

Charles in house?

Stage 2: (Subject-verb order with rising intonation)

He speak English?

Charles is in the house?

Stage 3: (Insertion of do at the beginning of the sentence)

Does he speaks English?

Does Charles is in the house?

Stage 4: (Base from in the main verb; inversion of subject and verb)

Does he speak English?

Is Charles in the house?

(As cited in Cowan, 2008, p. 43)

Errors shown in stages 2 and 3 are common among EFL learners and they reflect imperfect learning. Learners may make progress in learning wh- questions if they are received instruction in advance, which emphasizes the next stage beyond the current one.

The current research is based on the error analysis of wh-questions formed by high school pupils who learn English as an essential subject with a high coefficient. Our aim is to find out the areas of English grammar which are difficult for them when forming wh-questions and the causes of the appearance of such errors. The research methodology that was followed to carry out this research work is going to be explained in the following step.

2.4. Research Methodology

To accomplish this study, a particular research methodology was followed depending on one particular research instrument; that is a diagnostic grammar test to be conducted with (20) pupils from the third year level of secondary education, Foreign Language stream, precisely, from a Secondary School, in Naama, Algeria. This educational investigation employs a mixed method design which is a combination of quantitative and qualitative research approaches to deepen the analysis and interpretation of the test results.

2.4.1. Rationale of the Study

Although diagnostic tests are important to improve the quality of learning, teaching and assessment, there appears that they do not receive the sufficient amount of attention and interest. Teachers are requested to test their learners at the beginning of the year, or before a grammar course starts using tests which are prepared by themselves; and rarely within a team of work or by other designers. But, most of the time, the data obtained from these tests are not analyzed and used to make appropriate decisions to better learning. In other words, these tests do not seem to have a significant and an efficient impact on those who take the tests. Hence, in this research work, an attempt has been made to provide a methodological procedure which may be helpful and beneficial to analyze and interpret the diagnostic test results taking asking wh- questions as a study case for this investigation and due to some reasons.

Forming questions mainly wh-questions is one of the most important aspects of English grammar. Asking questions is very important in any language mainly English because communication develops into a longer conversation with the combination of questions either yes/no questions or wh- questions.

From among the many aspects of grammar, the diagnostic grammar test focuses on the basic knowledge of asking-questions, because in our previous research; magister we have found that learners have difficulty to do such task as one among the most difficult tasks. Another reason is that it is one of the most common questions in BAC exam. A lack of ability to ask wh-questions can also lead to difficulty in producing questions to complete the discourse task in BAC exam if the question is to complete a dialogue.

2.4.2. Research Objectives

The ultimate aim of this research work is to find out how data obtained from diagnostic grammar test can be examined, interpreted and used to support grammar teaching and thereby advance students' grammar learning. To apply this on the intended point for study, the current study seeks to answer the following research questions:

1- What kinds of errors do third year secondary school learners make when forming *Wh*-questions?

2- What are the causes of these errors for those learners?

3- How can teachers build instruction based on these data so as to avoid or at least reduce them?

In this way, the purposes of the two coming chapters are investigating the types of *wh-*question formation errors and the real causes behind their occurrence using error analysis method and determining whether the L1 interference was the major cause of making such grammatical errors or the intralingual factors caused by the target language.

2.4.3. Research Design

This research work employs a mixed method design which is a combination of quantitative and qualitative research approaches for the purpose of obtaining better results both at the level of data collection or analysis levels (Dornyei, 2007). Researchers can collect a wide range of rich information through quantitative research. Quantitative methods are research techniques that are used to gather information dealing with numbers and anything that is measurable (Holston, 2011). Crouch and Pearce (2012) describe this type of approach as any research which uses procedures that gather data in a numerical form. In other words, the results are presented in the form of tables, graphs, pie charts, numbers and percentages. The qualitative approach uses opinions and experiences to provide qualitative data. In this respect, a commonly distinction made between the two data is that *"quantitative indicators provide numeric information, while qualitative indicators give statements that convey opinions and experiences"* (Guijt, 1998, p. 32). That means that the quantitative method is statistical. However, qualitative method is not. The method adopted in this study integrates both methods in the process of data collection and interpretation using quantitative and qualitative data so that they better answer the questions raised in this research work. In the current study, a diagnostic grammar test is used to pinpoint the areas of weaknesses through determining errors.

2.4.4. Sample Population

Collecting data about the studied case for the purpose of analyzing and interpreting results is a very important element. Since it is inaccessible to conduct research with a large population, the sample population, which is the group of people that represents the same characteristics of the total population and through which the researcher can generalize findings to the entire population is a relevant element in the process of conducting any research work (Ary et al, 1979).

The population of this study consisted of (20) pupils from the third year level of secondary education, Foreign Language stream, precisely, from a secondary school, in

Naama, Algeria. They were males and females chosen for the study. Their age was between seventeen (17) and nineteen (19) years old. This sample population was to some extent homogeneous in the sense of age and gender. The total number of girls was (12) and of boys was (08). The participants have been studying English as an official subject for more than seven years. They were foreign languages stream pupils. They study English four times a week, one hour for each. Thus, they were expected to have a good level at English or at least an acceptable one. Their mother tongue is Arabic. However, English is a foreign language.

As mentioned before, the total number of the sample population was 20 pupils, i.e. the complete class and the only class in the school. It was limited to just this class at the target school because of the time constraints and the difficulties of gathering information and applying remedial teaching in other schools. Another reason for choosing this class was that English was one of the main subjects, which has a coefficient of 5. And we chose them to be subject of our research because we supposed that they had already learnt English mainly grammar much more than pupils of the other classes and therefore they had a better command of English. Some subjects of the study did not supply some questions.

2.4.5. Research Instruments

To conduct this research work, the researcher used a diagnostic grammar test. This assessment tool can provide the teacher with diagnostic data about pupils' strengths and weaknesses in a specific area of grammar.

Using tests in such research is an effective way to determine the pupils' difficulties in what has already been learnt, their prior knowledge and the progress of their learning. They are formative tools which help teachers to determine how well pupils perform before, during and after a course of study (Farris, 2015). In general, tests are assessment tools used to measure learners' performance. They are defined as "*any form of formal assessment in any language area which is administered under conditions which ensure measurement of individual performance in any given area*" (Harris and McCann, 1994, p. 93). They are used to collect information about learners' abilities, skills and knowledge to do tasks. In addition to measuring the learners' progress from using tests, valuable information can be collected about the teaching process, the teaching materials and the programmes. They are also used as a source of data in conducting educational research (Murray, 1998).

More precisely, diagnostic tests are designed to diagnose the pupils' language knowledge and use. They are administered before a course starts and devised to *"identify*

pupils' language problems, weaknesses or deficiencies ...in order to plan future teaching priorities" (Sárosdy et al, 2006, p. 138). This type of tests determines what learners know and what they do not. This type enables learners to be aware of their weaknesses and problematic areas. According to Harris and McCann, *"where other types of tests are based on success, diagnostic tests are based on failure"* (1994, p. 28). Based on the data obtained concerning learners' language knowledge, skills or performance, teachers can take appropriate decisions concerning future teaching and remedial work (Gronlund, 2006, as cited in Lee et al, 2008).

In order to make the teaching-learning process more effective, it very important to know the students' learning difficulties before and during instruction. Making use of diagnostic tests can be an efficient tool to achieve that goal. The diagnostic grammar test consisting of items based on a detailed analysis of the points wanted to be measured and a detailed study of the most common grammatical errors made by the learners can lead to target areas of difficulties, identify the sources and factors causing those difficulties and set remedial actions. Thus, through a good diagnostic test, learners can demonstrate all aspects of the ability being measured and pinpoint the types of errors they made (Somashekar, 2012).

The objective of this study is to analyze questions written by the participants through the designed test and according to the grammatical errors that they made, the teacher can identify areas of difficulties and weaknesses in learning the grammar point wanted to be measured. A detailed analysis of the test results can provide the teacher with insights about the reasons of grammar deficiencies and causes of committing such errors.

2.4.5.1. The Diagnostic Grammar Test

The current research work was initiated by a diagnostic test in English grammar for third year secondary school pupils. The researcher employed the test with 20 pupils in a duration of two hours for the purpose of obtaining data about the most frequent grammatical errors made by those pupils when forming wh-questions.

The designed test (see appendix A) was a discrete item test. It was based on the most important grammar elements that underline the basic knowledge of asking wh-questions. It is generally appropriate in terms of involving most of the types of the questions forms that need the application of the different necessary rules and structures. It was based on the most important grammar points needed to form wh-questions correctly, and its instruction is as the common grammar instruction that occurs in the Baccalaureate Exam. Before administering the test to the learners, it was tried out with other learners of the same level.

In general, this test consisted of just one task including 23 sentences. It was a limited-production task which requires the test-takers to construct responses. In this limited-production task, they are asked to write interrogative sentences. These type of tasks *"require some production of grammatical items but in a controlled manner"* (Richards, 2015, p. 285). In the abovementioned type of items, the responses are predetermined or more predictable and easy to score. This item is designed to prove the pupils understanding of grammar rules of forming questions and their ability to apply them, for the purpose of using them meaningfully later on.

Since the objective of this study is to analyze questions written by the participants and their ability to ask questions correctly, the researcher designed an instrument containing 23 sentences with some underlined words in each sentence. The learners were asked to make questions so that the underlined words were answers for them. This method has given the researcher full control over choosing the types of questions wanted to be written. Thus, the sentences with their underlined words have been carefully chosen so as to measure almost every aspect involved in forming questions, such as usage of different question words, auxiliaries, different forms and tenses. This technique has also given the researcher the opportunity of excluding yes-no questions, as they are already inclusive in the structure of wh-questions and both types are marked by subject-auxiliary inversion.

The test aims to assess mainly wh-question forms, especially the selection of the wh-words, word order including the S-AUX inversion and the aux- v forms. However, meaning is also tested since meaning needs to be considered to successfully ask the appropriate questions to complete the dialogue in discourse part in the Baccalaureate Exam. The knowledge of basic wh-questions consists of two elements: wh-word and internal structures. we test the knowledge of the two elements to obtain more detailed diagnosis.

Results from this diagnostic test concerning particular learning difficulties in asking wh-questions tend to have a high reliability because the same types of errors are repeated in almost the examples in the item. However, some sentences provide only partial information for diagnosing learners' difficulty in asking wh-questions. Each sentence in the item measures a particular aspect in this grammar point.

The test papers constituted the research corpus. After, they were being corrected, the errors that the learners committed were identified, categorized and explained for the purpose of finding out the most frequent errors and the reasons behind making them; which means that quantitative and qualitative analyses were followed for all the questions forms produced by the samples in a total of 460 questions.

All the questions are formed by applying the necessary rule which is the *wh-movement* to the initial position of the interrogative sentence. The other rules are necessary to be applied according to the structure of each sentence. Some questions are constructed by applying *subject- auxiliary inversion,* others without the need for *inversion.* However, in some cases *do- support* is necessary to form the questions. Depending on the aforementioned types of rules, the test questions are categorized into three types.

Questions 5, 6 and 8 should be formed without the need for *inversion.* They can be formed by just replacing the underlined words by the *wh-* words needed for these questions without changing anything. In these sentences the subject is questioned. To form the question, it is converted into the appropriate *wh-*word and the sentence is let as it is.

Concerning questions 1, 2, 9, 11, 12, 14 and 21, they should be constructed with *do-*support. They required the use of the auxiliary 'to do' in the right tense and the infinitive of the verb. These sentences are different in terms of the tense and type of verbs (regular or irregular). There are three sentences in the past tense, with both regular and irregular verbs, and four questions in the present tense, in which the *insertion* of *do* or *does* is necessary.

However, to form questions 3, 4, 7, 13, 18, 20 and22*subject- auxiliary inversion* rule should be applied. They should be formed by just separating the auxiliary from the verb and putting it before the subject without using the auxiliary "to do" or giving the infinitive of the verbs. 7 sentences contain auxiliary verbs (two for have and four for be) and one sentence has a modal verb.

A common aspect between questions10, 19, 23, 15, 16 and 17 even if they are different in the rule to be applied, is the need for the use of the *wh-* word **What** plus a suitable form of **'do'** to ask questions about **activities.** To test the learners' ability to form such type questions, they are requested to form different types of questions. These differences are going to be illustrated in details as follows:

- *Question 10 r*equires *do- support (do)*and ***the infinitive of do.***
- *Question 19*requires*do- support (does)* and ***the infinitive of do.***
- *Question 23*require*s do- support (did)*and ***the infinitive of do.***
- *Question 15*requires *subject- auxiliary inversion* after conjugating '***do'*** in the past perfect tense ***(had done).***
- *Question 16*requires*subject- auxiliary inversion* after conjugating '***do'*** in the past continuous tense ***(was doing).***
- *Question 17*requires *subject- auxiliary inversion* after using the modal verb should with '***do' (should do)***

2.4.6. Research Method

In our research we used Error Analysis as one of the most useful research methods used for language diagnostic education. Steps of analyzing the errors made by the learners are those which are set in the linguist Corder model mentioned by Ellis and Barkhiuzen (2005). They are as follows:

1. Collection of samples of learner language, i.e. decisions about the outputs of the learners' language that can be used for the analysis and how to collect the data.

2. Identification of errors, i.e. the way of identifying the errors, e.g. by underlying the errors and using the symbols correcting code.

3. Classification of errors, i.e. the errors can be categorized into groups which are stated according to their origin and presence.

4. Explanation of errors, i.e. the calculating and explaining the errors in a suitable way.

5. Error evaluation, i.e. this step involves the interpretation of tables, graphs and conclusions

The first step includes collecting the language outputs of the learners that can be used for the analysis and how to collect the data. The choice of sentences in the task of the diagnostic grammar test was based on a detailed analysis of the points wanted to be measured and a detailed study of the most common grammatical errors made by the learners can lead to target areas of difficulties. The stages taken by the researcher were reading the learners' responses, identifying the errors, developing a coding system to identify and categorize the students' errors and coding the data which means applying the categories of the learners' errors to all data collected, then interpreting the results to determine the errors that need more attention and reinforcement.

2.4.7. Coding and Categorization of Errors

The description of errors includes the identification and categorization of errors under particular categories and a quantification of each type. Many researchers argue the need for descriptive taxonomies of errors, from which Dulay's taxonomy is probably the most suitable (Dulay et al, 1982). In their linguistic description, four broad categories are suggested; omissions, additions, misformation and misordering. However, we consider 'Blends' for the

use of two forms at the same time because of uncertainty in deciding which one is correct as errors of addition. In addition to that, errors of misselection are proposed for just the wrong choice of the wh-words.   To analyze errors made when forming *wh*-questions, we use categories of errors adapted from the coding scheme suggested by Ambridge, Rowland, Theakston, and Tomasello, (2006, as cited in Pozzan, 2011) mentioned previously.

To get acquainted with the topic from all sides and conduct an in-depth study of errors, we decided to base our analysis on the aforementioned taxonomies suitable for this study. For applying the classifications mentioned previously and in the analysis of incorrect *wh*-questions suggested by Ambridge, Rowland, Theakston, and Tomasello (2006) for analyzing errors when forming wh-questions, a different coding scheme and three types of analyses were conducted throughout this dissertation. This is going to be illustrated in the following table.

Category	Description	Example
Omissions	-The absence of an item that must appear in a well-formed question.	What √ she doing? (is)
Additions	-The presence of an item that must not appear in well-formed question.	What **do** is important?
Misformations	-The use of incorrect forms of morpheme or structure.	What is he **do**? (What was he **doing**?)
Misorderings	-The incorrect placement of a morpheme or group of morphemes in an utterance.	What daddy is doing?
Misselection	-The wrong selection of items (wh-words)	- **Where** did Hong Kong revert to China? **(When)**
Blends (as additions)	-for the use of two forms at the same time because of uncertainty in deciding which one is correct.	- Who **did answered** the questions correctly?

Table 2.5. A surface strategy taxonomy of errors in forming wh-questions.
(adapted from categories and examples taken from Dulay, Burt, and Krashen (1982), as cited in Ellis, 1994, p. 56 and James (2010) as cited in Masruddin and Karmila, 2018, p. 127).

As mentioned above, three analyses were conducted on the data and they are as follows.
1- 1st analysis: All the questions were coded as either correct or incorrect in terms of word order, verbal and auxiliary morphology and the presence of the necessary lexical items (as *wh*-words, subject, etc.)

2- 2ⁿᵈ analysis: We analyzed the three types of questions; correct, incorrect and avoided ones into categories depending on the types of *wh-* questions forms to get deeper insights on the most difficult forms encountered by those learners in questions construction.

3- 3ʳᵈ analysis: Concerning coding errors, the errors were coded into five categories depending on the surface strategy taxonomy of errors presented in table above, and which are omission, addition, misformation, misordering and misselection. However, blends are considered in this analysis as addition errors.

2.5. Conclusion

This chapter has dealt with the theoretical concepts related to error analysis and the acquisition of the *wh-*questions as a case study for this research work. It has shed light on the difficulties of asking *wh-*questions in English among learners of English as a foreign language mainly Arab learners and their potential sources.

It has also described the research methodology through displaying the research design, the objectives wanted to be achieved and the employed research instrument. It has also explained in details how Error Analysis as a useful research method was used in such language diagnostic testing.

An attempt to analyze the data obtained from the aforementioned instrument will be conducted in the following chapter. The results will be interpreted for the purpose of providing answers to the questions raised in this chapter.

CHAPTER THREE:

Data Analysis

and

Interpretation

Chapter Three:

Data Analysis and Interpretation

3.1. Introduction

To carry out this research, a particular research methodology was followed to analyze and interpret the test results. The analysis of the learners' responses using Error Analysis Method aimed at searching for the most difficult forms encountered by the target learners in questions construction, and finding out the types of errors that they made when forming *wh*-questions and the causes and factors behind making them. This is for the purpose of pinpointing areas that need more attention and reinforcement and setting effective instructional strategies for remedial teaching and further instruction. The population of this study consisted of (20) pupils from the third year level of secondary education, Foreign Language stream; which means that they were expected to be good at English as a foreign language or at least have an acceptable level.

To determine areas of weaknesses and difficulties to form *wh*-questions and the reasons behind making them, the researcher used a diagnostic grammar test. The test papers were being corrected, the errors that the learners committed were identified, categorized and then explained. The test takers were requested to form 23 questions including different *wh-* words, tenses and forms.

The learners' responses were being analyzed for the purpose of identifying the errors that they committed. This study provides an overall overview of the areas of their weaknesses and difficulties in such grammar point and at the same time their difficulties in other linguistic points that are included in the course of *wh*-questions formation such as subject-verb agreement, correct forms of auxiliaries and verbs in different tenses and so on. This gives the possibility of taking right decisions of which grammar points should be taught in advance.

3.2.   Analysis of the Diagnostic Grammar Test

This work provides an interpretation of the test results in an attempt to answer the questions raised by this research work. The grammar test analysis includes an evaluation of the pupils' marks and a study of the students' responses. This study identifies the types and frequency of errors committed by the third year pupils and the most common ones among them depending on Error Analysis Method.

3.2.1. Evaluation of the Test Results

The study of the learners' marks in this grammar test provided clear information about their level and the extent of their ability to form wh-questions correctly. In the following table, the test results are displayed in increasing intervals from the lowest level to the highest one.

Mark (out of 20)	Number	Percentage
0 - 4.99	13	**6 5%**
5 - 8.99	6	**30%**
9 - 9.99	0	**0%**
10 ≥	1	**05 %**

Table 3.1. Percentages of the diagnostic grammar test results

Depending on the table above, the pupils' level in forming *wh*-questions in English was very weak since most of the marks were less than five (5) out of twenty (20), representing **65%** of the total number of the marks. Furthermore, the total number of the marks below the passmark represented nineteen (19), representing a percentage of **95%.** This low level was confirmed also when calculating **the mean of this test that was (4.8).** From the table above, it can also be concluded that the accuracy rate of the *wh*-questions acquisition by those learners was very weak.

The table above provided an overall view of the test results. For more details, the following chart illustrates the participants' precise marks.
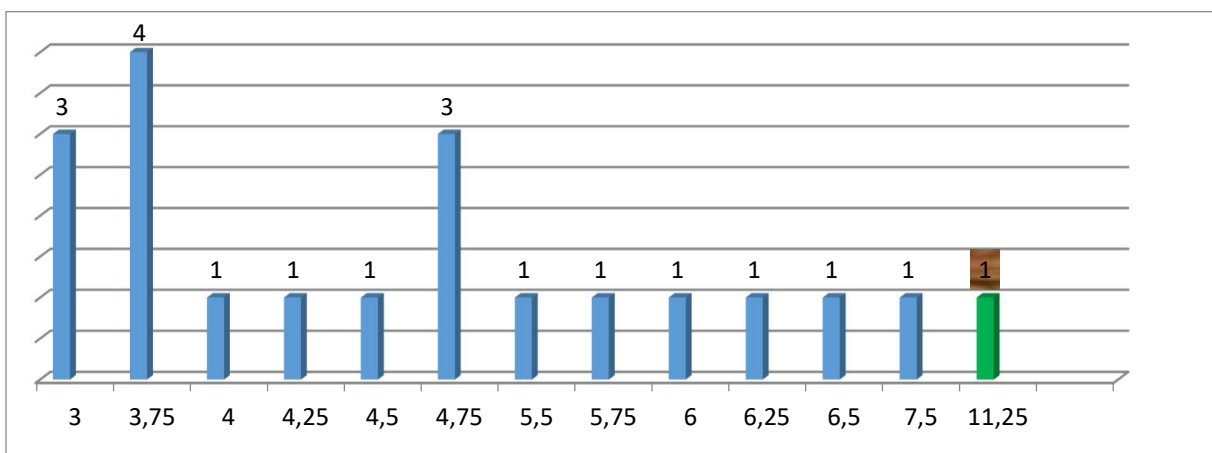
Bar graph 3.1. Participants' grades distribution out of 20

As it is obvious above, those learners were not able to produce fully correct questions since their marks were very weak. Just one pupil had the passmark and out of 20 pupils 19 got less than 10 points. Three participants got 3 points out of 20 and four scored 3.75. Seven candidates had between 4 and 4.75 points. Two pupils got 5.5 and 5. 75 points. However, three participants scored between 6 and 6.5 points and one had 7.5 points.

Depending on the data above, it is obvious that the accuracy rate of the *wh*-questions acquisition by those learners was unsatisfactory at all. This is what has been also confirmed by the percentage of the correct questions.

3.2.2. Type and Frequency of Questions

To get a complete picture of the grammatical competence of the pupils in forming *wh*-questions, each pupil was asked to form 23 *wh*-questions which are different in forms. As we had 20 pupils, the total number of questions was 460. The following table provides an overall impression of the degree of difficulty of such task through displaying the frequencies and percentages of the correct answers and the wrong answers as well as the number of the absent answers.

Types of answers	Correct questions	Absence of questions	Wrong questions
Number	36	84	340
Per cent	7.82 %	18.26 %	73.91 %

Table 3.2. Type and frequency of questions

As it has been shown in the table, out of the 460 questions only 36 were entirely correct, while 340 were incorrect, with at least one to multiple errors in each question. However, 84 questions were avoided. Depending on that, asking *wh*-questions presented a serious difficulty for learners since the percentage of the correct answers in comparison with the other answers was **(7.82 %).** Taking Crompton's (2011) accuracy rate (after Dulay and Burt, 1974, and Brown, 1973) of 90% or higher as a sign of acquisition, **7.82 %** is a surprisingly very weak rate compared with similar studies done with Arab EFL learners such as **78.78 %** in the research work conducted by **Al-Mekhlafi, (2013)** in Sohar University in the Sultanate of Oman and **30%**in the study done by **Addaibani, (2017)** among EFL majors in Najran University –KSA.

Table 3.2 has given a general overview on the frequencies and percentages of the correct answers and the wrong answers as well as the number of the absent answers. For more

details, the twenty-three questions formed by the pupils were studied and analyzed aiming at searching for the questions forms that presented more difficulty.

3.2.3. Type and Frequency of each Question in the Test

Accordingly, what we are interested in in this stage is identifying the frequency of the correct and incorrect responses as well as the absent ones in each question. This is what has been done via studying the questions formed by the learners one by one.

N	Questions	Correct Questions		Incorrect Questions		No Response	
		N	%	N	%	N	%
01	How long ago did Kareen go to USA?	0	0 %	18	90%	2	10%
02	When did Hong Kong revert to China?	1	5%	18	90%	1	5%
03	Where has she been since she was a child?	0	0 %	19	95%	1	5%
04	Why is it forbidden to kill whales?	0	0 %	19	95%	1	5%
05	Who answered all the questions correctly?	8	40%	11	55%	1	5%
06	Whose mother is Russian?	0	0 %	17	85%	3	15%
07	What is he studying?	1	5%	19	95%	0	0 %
08	What is important?	6	30%	14	70%	0	0 %
09	How do my parents feel after work?	0	0 %	17	85%	3	15%
10	What do the girls do?	0	0 %	19	95%	1	5%
11	Which jacket does Lila like to wear?	0	0 %	19	95%	1	5%
12	Whom/who did my father meet yesterday?	0	0 %	15	75%	5	25%
13	How many books has Helen read?	1	5%	16	80%	3	15%
14	How often do children brush their teeth?	0	0 %	16	80%	4	20%
15	What had the football team done several times?	1	5%	9	45%	10	50%
16	What was he doing?	0	0 %	18	90%	2	10%
17	What should people do?	1	5%	17	85%	2	10%
18	How was George's grandfather?	5	25%	8	40%	7	35%
19	What does this girl do there?	1	5%	9	45%	10	50%
20	What should people protect?	4	20%	14	70%	2	10%
21	What does child labour mean?	2	10%	8	40%	10	50%
22	Where is violence found?	4	20%	13	65%	3	15%
23	What did Arabs do?	1	5%	7	35%	12	60%
	Total number	36		340		84	

Table 3.3. Types and frequency of each question in the test

To interpret the results mentioned in the table above, we can set intervals as criteria for evaluating the learners' competencies in *wh*-questions construction. They are as follows.

- The **passmark rate** (50%) in each question is represented by at least **10 correct answers** since the number of the learners who took the test is 20.

- If the students' answers are all wrong, which means that no answer is correct; i.e. 0%, then this means that students have **no competence** in formulating this type of question.

- If the number of correct answers is limited between **1 and 3**, then this means that the competence of pupils in formulating this question is **very weak**.

- If the number of correct answers is **4, 5 or 6,** then this means that the competence of those learners in asking this type of question is **weak**.

- If the number of correct answers is limited between **7 and 9**, then this means that the competence of pupils in formulating this sort of question is **below the passmark**.

- If a question is formed correctly by **10 pupils**, this means that the learners' competence in forming this type of question reached **the passmark rate.**

- If the number of correct answers is limited between **11 and 13**, then this means that the competence of pupils in formulating this sort of question is **above the passmark**.

- If the number of correct answers is **14, 15 or 16,** then this means that the competence of those learners in asking this type of question is **good.**

- If the number of correct answers is limited between **17 and 19**, then this means that the competence of pupils in formulating this question is **very good**.

- If the students' answers are **all correct** in a particular question, then this means that their competence in formulating such type of question is **excellent**.

Based on the analysis above, the percentage of the correct answers in all the questions did not reach the passmark rate which is at least 10 correct questions for each. So, their ability to form *wh*-questions is below the passmark rate.

- There are some questions that all the learners failed to form correctly and which are **questions 1, 3, 4, 6, 9, 10, 11, 12, 14 and 16** in a percentage of **0%** for correct answers. The learners had **no competence** to form such types of questions.

- However, seven types of questions which are **questions 2, 7, 13, 15, 17, 19, and 23**are answered correctly by at least **one pupil** in a percentage of **5%**. So, their competence was **very weak**.

- **Question 21** was answered correctly by **two pupils** in a percentage of **10%**. Hence, the learners' competence to form such types of questions was **very weak.**

- **Questions 20 and 22** were answered correctly by **four pupils** in a percentage of **20%**. **Question 5** was answered correctly by **five pupils** in a percentage of **25%. Question 8** was answered correctly by **six pupils** in a percentage of **30%.** Then, the competence of those learners in asking such types of questions was **weak**.

- **Question 5** was answered correctly by **8 pupils** in a percentage of **40%.** Their ability to construct this question was **below the passmark**.

Depending on what has been mentioned above, the proficiency of these learners in formulating *wh*-questions did not reach the passmark rate. On the contrary, it is very weak. Even the types of the correct questions differ in the extent of their difficulty. This can be seen in the number of correct answers. In the following stage, we will get the first impression on the most difficult forms of *wh*-questions encountered by the target learners through comparing the frequency and percentage of correct questions. But the analysis will be based on the participants' different levels. As displayed previously, nineteen participants got less than the passmark in approximately similar marks that reflect similar difficulties. However, one pupil got 11.25 points out of 20. Obviously, she should not receive the same remedial instruction. For this reason, her responses have been studied separately and the errors she committed were not included in the analysis of the whole class.

First, we try to analyze the test papers of the whole class except the pupil who got the passmark and who is going to be treated after under the name of the exceptional pupil.

3.2.4. Percentages of Correct Questions of the Principal Sample

Through this stage, we will get the first impression on the most difficult forms of *wh*-questions encountered by the target learners. As said previously, out of 460 questions 36 were correct answers. 28 right questions within these answers were constructed by the rest of the class, and which differed in their frequency. This is what has been shown in this table in details.

N	Questions	Number	Per cent %
01	How long ago did Kareen go to USA?	0	**0 %**
02	When did Hong Kong revert to China?	0	**0 %**
03	Where has she been since she was a child?	0	**0 %**
04	Why is it forbidden to kill whales?	0	**0 %**
05	Who answered all the questions correctly?	7	**22.22 %**
06	Whose mother is Russian?	0	**0 %**
07	What is he studying?	1	**2.77 %**
08	What is important?	6	**16.66 %**
09	How do my parents feel after work?	0	**0 %**
10	What do the girls do?	0	**0 %**
11	Which jacket does Lila like to wear?	0	**0 %**
12	Whom/who did my father meet yesterday?	0	**0 %**
13	How many books has Helen read?	0	**0 %**
14	How often do children brush their teeth?	0	**0 %**
15	What had the football team done several times?	0	**0%**
16	What was he doing?	0	**0 %**
17	What should people do?	0	**0 %**
18	How was George's grandfather?	5	**13.88 %**
19	What does this girl do there?	0	**0 %**
20	What should people protect?	3	**8.33 %**
21	What does child labour mean?	1	**2.77 %**
22	Where is violence found?	4	**11.11 %**
23	What did Arabs do?	0	**0 %**
Total number		28	**77.77 %**

Table 3.4. Percentages of correct questions

As it can be seen from the previous table, in the total number of answers, the nineteen pupils formed 28 correct questions. Within 28 correct questions, 22.22 % correct questions were the sentence type as "who answered all the questions correctly?"; 16.66 %

correct questions were the sentence type as "what is important?"; 13.88 % correct questions were the sentence type as "How was George's grandfather?". However, **11.11 %** correct questions were the sentence type as 'Where is violence found?' and 8.33 % for 'What should people protect?'. Just one correct answer in a percentage of **2**.77 % were the sentence type as questions 'What does child labour mean?' and 'What is he studying?', and no correct response in questions 1, 2, 3, 4, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19 and 23.

In the previous analysis, the findings have been displayed according to each questions. However, in the following stage, we attempted to study these questions within special categories to get deeper insights on the most complicated forms of *wh-* questions met by those learners. These forms were categorized and studied depending on their different structures.

3.2.5. Most Difficult Forms of *Wh*-questions

The questions displayed in the previous table were classified depending on their different types for the analysis. They were classified into categories based on their corresponding type of questions and the number of the correct answers were calculated. This is illustrated in the following table.

Types of questions	Number of correct answers	Percentage
Questions without inversion using ' who'	08	**22.22 %**
Questions without inversion using ' what'	06	**16.66 %**
Questions without inversion using ' whose'	00	**00%**
Questions with inversion (copula 'be')	05	**13.88 %**
Questions with inversion (aux. ' be')	05	**13.88 %**
Questions with inversion (aux. ' have')	01	**2.77 %**
Questions with inversion (model verb)	03	**8.33 %**
Questions with 'do' support	01	**2.77 %**
Questions with (what + do?)	00	**00 %**

Table 3.5. Frequency of correct answers depending on forms types.

Based on the data above, it is obvious that the most difficult form of questions is question with 'whose' and Questions with (what + do?) since no one can supply a correct

answer. The least number of correct questions made by those learners were *wh*-questions with inversion mainly questions that contain an auxiliary verb 'to have' and *wh*-questions that need do-support as they represent the least percentage (**2.77 %**) of the correct answers. However, the next number of correct answers are in questions with inversion that contain a modal verb and the auxiliary 'to be' in percentages of 8.33 % and 13.88 % respectively. The other correct questions are in Questions with inversion (copula 'be'), Questions without inversion using 'what' and Questions without inversion using 'who' in percentages of 13.88 %, 16.66 % and 22.22 % respectively.

To get deeper insights on the most difficult forms encountered by those learners in questions construction, we analyzed the three types of questions; correct, incorrect and avoided ones into the following categories depending on the types of *wh-* questions forms:

- Questions without inversion to ask about the subject in the sentence using 'who' or 'what'. In this type, we included, but separately, the question to ask about possession using 'whose' as it can be categorized as a question with inversion in another form.
- Questions with inversion containing copula 'be'
- Questions with inversion containing either the auxiliary 'be' or 'have' or a model verb
- Questions with 'do' support
- Questions with '*What + a form of do'* to ask about **activities.**
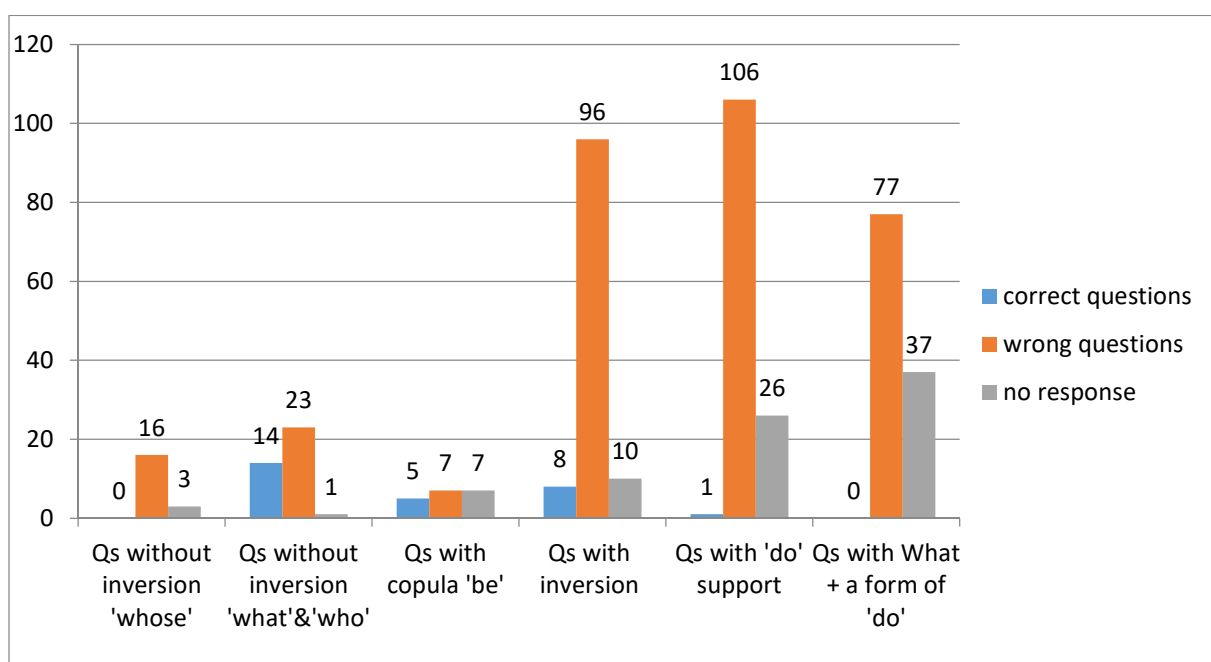
Bar graph 3.2. Classification of types of Wh-questions structures according to their difficulty.

It is worth mentioning that in the first and the third types, we have just (01) question each, (02) for the second type, (06) for the fourth and the sixth types for each and (07) for the fifth. Our analysis took in consideration the number of questions in the test. When having a look at the percentages of the correct questions produced by the learners in the bar graph above, we can confirm the findings found out previously since the total number of correct questions in questions without inversion using 'who' or 'what' represented the highest one (14) in spite of the fact that there were just two questions and just one pupil did not ask a question. So, it represented the least difficult type. Then, there was just one question to represent questions with copula 'be'. Though it is somehow complicated and the number of the correct answers (5) was less than those in questions with inversion (08), we consider it as the second least difficult type because its total number of questions was (19) compared with those of questions with inversion (114). The questions that let without answers for one reason or another can lead to the most difficult types of forms. It seems that questions with What + a form of 'do' represented the most difficult type since the number of the absent responses was the highest one (37) and there is no correct question. Questions with 'do' support form the next most problematic type depending on the number of the avoided questions (26) and the correct questions (1). As it is very obvious above, questions without inversion asking about possession using 'whose' is the most difficult one since no one can supply the correct question.

As it has been mentioned earlier, out of the 460 questions only 36 were entirely correct in a percentage of 7.82 %. Within this percentage, the rest of the class formed correctly 28 questions in a proportion of 22.22%.   It can be concluded that almost all of them have acquired *wh*-questions unsuccessfully and encountered many serious problems in forming questions. To determine these difficulties precisely, their responses were analyzed to identify the types of errors according to each structure.

3.2.6.   Types of Errors Recorded from the Participants' tests

In accordance with the findings above, the test results were analyzed and coded based on whether some features were correctly used by the participants when forming *wh*-questions. These features differ depending on the types of questions mentioned above. Thus, the analysis of the participants 'responses dealt with each type separately for the purpose of finding out the most common difficulties and errors according to the corresponding structures, and then comparing the gravity of errors in each type to determine

the most difficult forms among them. Hence, the grammar errors made by those learners were first examined under the categories of the surface structure taxonomy of errors suggested by Dulay et al (1982) and which are omissions, *additions, misformation and misordering*. Misselection errors proposed by James (2010) (as cited in Masruddin and Karmila, 2018) is restricted to the wrong choice of *wh-* words in this research. Depending on these taxonomies, errors can be categorized as errors of omission for the absence of necessary items that must appear in a well-formed utterance, errors of addition for adding items that must not appear in a well-constructed utterance, misformation for incorrect forms of morpheme or structure, misordering for the wrong order of the elements of an utterance and misselection for the wrong selection of items.

As it has been mentioned previously, the analysis of the participants 'responses dealt with each type separately starting with the type of questions without inversion in which 'who' or 'what' are used to ask about the subject in the sentence.

3.2.6.1. Types of Errors Committed in Questions without Inversion

In questions without inversion, there is no need for the subject- auxiliary inversion. This type deals with asking questions about the subject in the sentence using 'who' or 'what' and possession using 'whose'.

a. Questions without Inversion (Asking about the Subject)

In such questions, the subject in the sentence is converted into the appropriate *wh*-word (either *who* or *what*) and the rest the sentence is let as it is. The questions were studied and coded depending on whether these two features were correctly used by the respondents in their construction of such type of questions. There are two questions of this type in the test:

a- Q5: Who answered all the questions correctly? → **James** answered all the questions correctly.

b- Q8: What is important? → **Respect** is important.

The learners' responses to ask these two questions were analyzed to determine areas of their weaknesses and difficulties through identifying the most frequent errors that they committed. But before that, the types of errors can be divided into five broad categories,

namely omission errors, addition errors, misformation errors, misordering errors, misselection errors. Their frequencies and percentages are as follows.

Type of errors	Frequency of errors	Percentage
Omission errors	05	10.86%
Addition errors	29	63.04%
Misformation errors	06	13.04%
Misordering errors	04	8.69 %
Misselection of *wh*-word	02	4.34 %

Table 3.6. Types of errors committed in questions without inversion

Within 46errors, the unnecessary addition of items represented the most common error type in a percentage of 63.04 %. The next most common types were misformation errors and omission errors in the same rate 13.04 %. Misordering errors were found to be the third common type in a percentage of 8.69 %. However, it can be concluded that the respondents did not have problem with the *wh*-words suitable for these questions since misselection errors were in the smallest proportion (4.34 %).

Addition errors are characterized by the occurrence of an item that must not occur in a well- formed question. From the data obtained, addition errors in such type fell into four categories; be redundancy, do redundancy, and unnecessary insertion of words; namely the definite article 'the' and the addition of the underlined word meant by the question. The following pie chart shows the error frequency for additions.
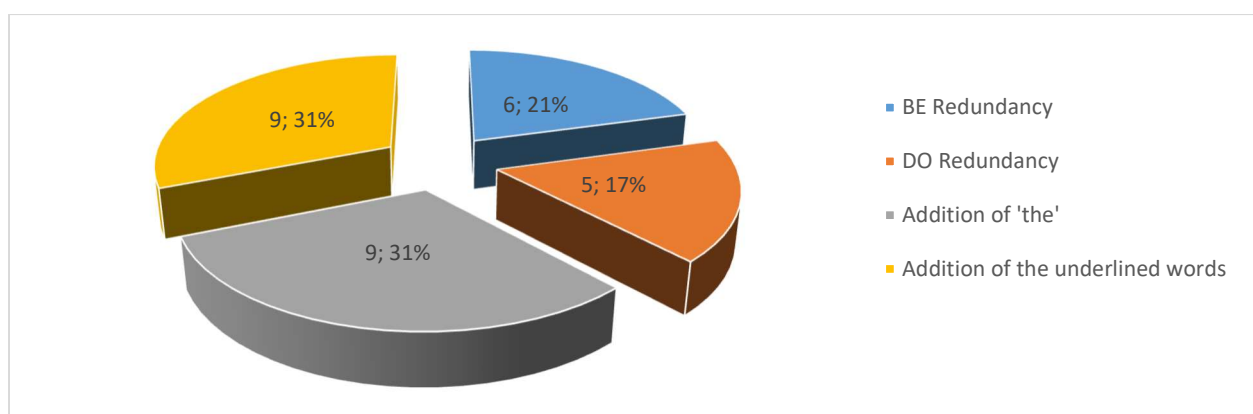
Pie chart 3.1. Frequency of addition errors in questions without inversion

Based on the data above, addition of words which are not required represents the highest rate (09 errors). Pupils added the definite article 'the' in question 8 as shown in this question: What is **the** important? The next most common errors of additions are the insertion of the underlined words targeted for the questions mainly the word respect in question 8 as shown in this example: what is **respect**?   However, the unnecessary insertion of the auxiliaries 'to be' and 'to do' represents the next common errors in approximately similar numbers (06 and 05 respectively). These are some examples of these categories: (Who **is do** answered all the questions correctly? – Who **is** answered all the questions correctly? -Who **did** answered all the questions correctly? – What **do** is important?).

Omission errors occur when the learner omits one element or more of a correct question. In this study, errors of omission found in the respondents' questions can be omission of the main verb and the omission of words from the lexical items used in the questions. The numbers of omission errors are shown in the following pie chart.
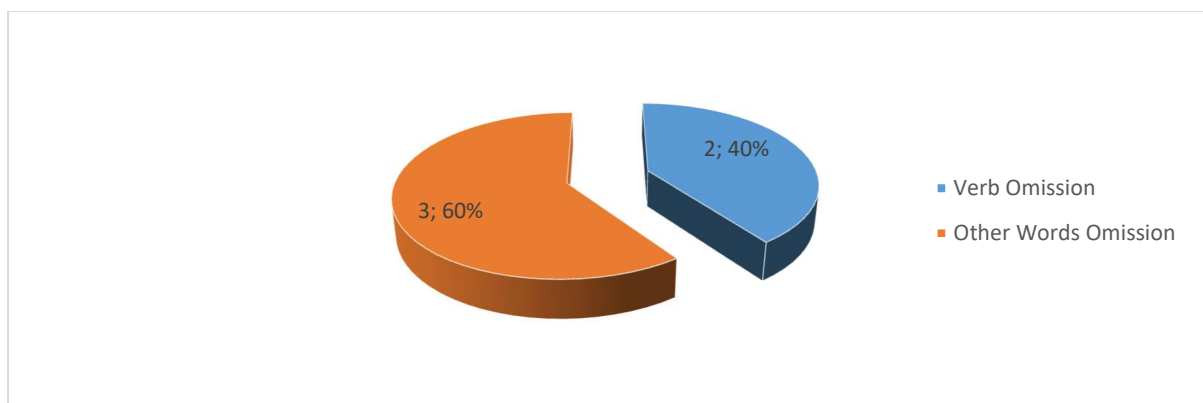
Pie chart 3.2. Frequency of omission errors in questions without inversion

Omission errors represented in the omission of words from question 5 such as 'all' and 'correctly'. However, the main verb was omitted twice. These are some examples: (Who answered √ the questions correctly? -Who answered all the questions √? -Who √ all the questions correctly?).

Errors of misformation occur when the learner uses forms of morphemes or structures incorrectly. From the data obtained, misformation errors consist of misformation of the main verb and the use of yes/no questions instead. Pie chart 2 shows the error frequency for misformations.
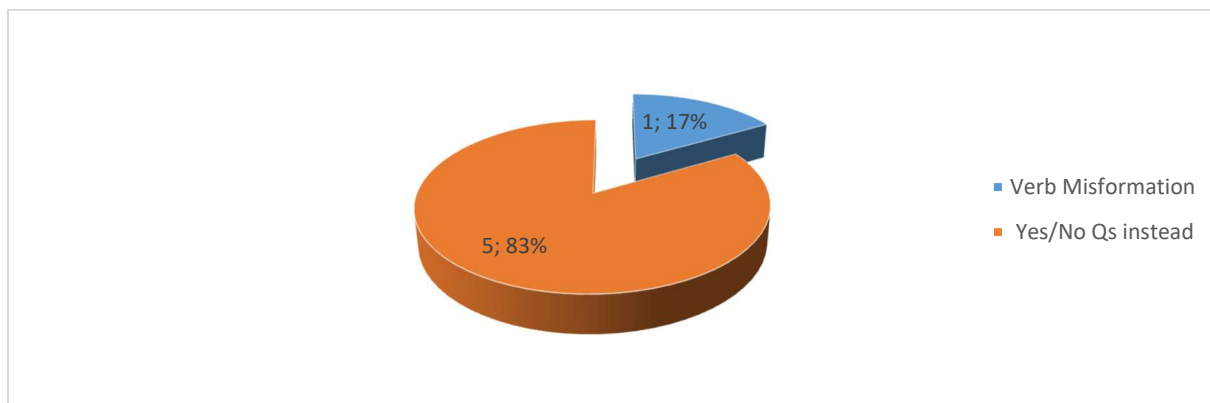
Pie chart 3.3. Frequency of misformation errors in questions without inversion

In these two questions, learners formed five questions that sound like yes/no questions instead of the target *wh-* questions. However, the main verb was misformed once. Some examples for illustrating these categories are as follows. (- Does James answered all the questions correctly? – Are the respect are important? - Does the respect important? - Does respect is important?).

Misordering errors are characterized by the wrong order of words in the question. Misordering errors that have been found in this type of questions presented in the ill-formed questions that are four; such as (- Which questions answered than James? - Respect is it important? - It is respect is   important?)

Misselection errors are characterized by the wrong choice and use of an item. In asking questions, misselection errors presented in the misselection of the *wh*-word that was made by two pupils who replaced who with which and what.

Depending on the data provided previously, the most common errors committed by the learners when asking questions about the subject have been identified. The following bar graph illustrates their frequency from the most common to the least.
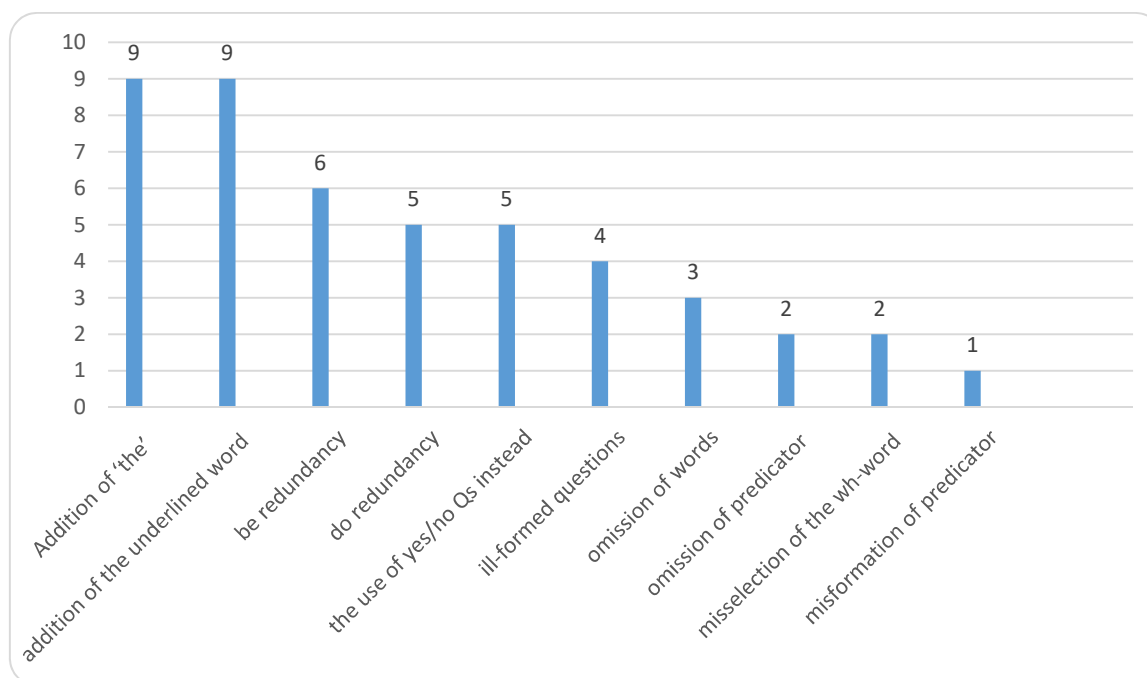
Bar graph 3.3. The Frequency of errors in constructing wh-questions without inversion

The bar graph above gave information about the types of error made by the pupils in forming such type of questions. It shows that the learners added the definite article 'the' in Q8 09 times. The underlined words that were targeted for questions and which must not appear in the questions were added 09 times. The next most common error type was the unnecessary insertion of the auxiliary 'to be'. The categories of addition of the auxiliary 'to do' and using yes/no questions instead of *wh*-questions come next. The other categories account for relatively less percentages. They are ill-formed questions, omission of lexical items used in the sentences, omission or misformation of predicator and misselection of the interrogative words.

b. Questions Without Inversion Using 'Whose'

In such questions, the subject in the sentence is converted into the appropriate *wh*-word (whose) and the rest the sentence is let as it is. The questions were studied and coded depending on whether these two features were correctly used by the respondents in their construction of such type of questions.

There is just one question of this type in the test:

- Q5: **Whose** mother is Russian? → **George's** mother is Russian.

Within 19 questions, four (03) questions were avoided to be answered, and the rest of the questions were all wrong. Within 16 wrong questions, the participants committed 33 errors. The errors identified can be classified into six categories, namely omission of copula be, addition of words, be redundancy, do redundancy, misselection of *wh*-word and ill-formed questions. The following table displays the frequency of each type.

Type of errors	Frequency of errors
BE Omission	1
Words Addition	5
BE redundancy	4
DO redundancy	1
Wh- word Misselection	15
Ill-formed questions	7

Table 3.7. Frequency of errors types committed in questions without inversion (Whose)

Based on the table above, it is clear that asking questions using the *wh-* word 'whose' forms a serious problem among those learners since the percentage of correct answers is 0 %. *Wh-* word Misselection presents the highest rate of errors. These are some erroneous questions: Who mother is Russian? - Whom mother is Russian? The next most common errors are ill-formed questions that form 7 out of thirty-four errors. These are some examples: Who are does Russian? – How is have mother Russian? – Who is Russian is mother? The unnecessary insertion of words mainly (have and the) presents the next common type. However, be redundancy forms the third error type. These are some examples: Who is mother is Russian? - Who **are** mother √ Russian? The least number of errors were made in do redundancy and omission of the verb to be. These illustrate these types of errors: Who are **does** Russian? - Who the mother √ Russian?

3.2.6.2. Type Errors Committed in Questions with Copula 'be'

If the sentence contains a copula *be*, two necessary rules are necessary to be applied: *wh-movement* and *subject- auxiliary inversion;* which means if 'to be' is the main verb in the sentence it functions as operator and placed before the subject to form questions. In the test, there is just one question with copula 'be':

Q18- **How** was George's grandfather? → George's grandfather was **strong**.

Within 19 questions, seven questions were avoided to be answered. Within 12 questions, there were seven wrong questions, in which the participants committed 10 errors. The errors identified can be classified into five categories, namely omission of copula be, addition of words, do redundancy, absence of be-subject inversion, misselection of *wh*-word. The following table displays the frequency of each type.

Type of errors	Frequency of errors
BE Omission	1
Words Addition	2
Do redundancy	1
BE-subject inversion	2
Wh- word Misselection	4

Table 3.8. Frequency of errors types committed in questions with inversion (copula be)

Based on the table above, it is clear that the *wh*- word 'how' forms a serious problem among those learners since 07 participants avoided to form such question and other four pupils failed to select this interrogative word. These are some erroneous questions: **Who** was George's grandfather? **What** George's grandfather <u>was</u>? The next existing errors are the unnecessary insertion of words that form two out of ten; namely he, it and who in the following erroneous questions: How **who**√ George's grandfather? How **it** was George's grandfather? <u>What he</u> was George's grandfather? However, the absence of verb subject inversion forms the third error type. The least number of errors were made in do redundancy and omission of the verb to be. These are some illustrating examples: How **did** George's grandfather? How √ George's grandfather?

3.2.6.3. Type of Errors Committed in Questions with Inversion

If the sentence contains an auxiliary verb or a modal verb, two necessary rules are necessary to be applied: *wh- movement* and *subject- auxiliary inversion.* In such questions, the auxiliary or the model verb is placed before the subject and the main verb is let as it is without the need to put the infinitive or something else. The questions were studied and coded depending on whether these two features were correctly used or not. The learners' responses to ask this type of questions were analyzed to determine areas of their weaknesses and difficulties through identifying the most frequent errors that they committed. But before that,

the types of errors can be divided into five broad categories, namely omission errors, addition errors, misformation errors, misordering errors, misselection errors.

There are three questions that need *subject- auxiliary inversion* containing *auxiliary 'to be',* two with *auxiliary 'to have'* and one with *'a model verb '* in a total of *six questions* in *the type of questions with inversion*. They are as follows.

- Q4: Why is it forbidden to kill whales? → It is forbidden to kill whales **because they are in danger of extinction.**
- Q7: What is he studying? →He is studying **architecture**
- Q22: Where is violence found? → Violence is found **in schools, institutions, on the streets and in the workplace**
- Q3: Where has she been since she was a child? → She has been in **London** since she was a child.
- Q 13: How many books has Helen read? →Helen has read **ten** books
- Q20: What should people protect? → People should protect **the environment**

In a total of 114 questions, ten (10) questions were avoided to be answered. Within 104 questions, there were 96 wrong questions in which the participants committed 252 errors. The errors identified can be broadly classified into five categories, namely omission errors, addition errors, misformation errors, misordering errors, misselection errors. The following table displays the frequency of each type.

Type of errors	Frequency of errors	Percentage
Omission errors	76	30.15%
Addition errors	40	15.87%
Misformation errors	21	8.33%
Misordering errors	83	32.93%
Misselection errors	32	12.69%

Table3.9. Frequency of errors types committed in questions with inversion

Based on the table above, it is clear that the prevalent problem among those learners was words order since misordering errors represent the highest percentage 32.93%. The next most common errors are omission errors in a percentage of 30.15 %. However, addition errors

form the third most common error type in a percentage of 15.87%. Misselection errors represented in the wrong choice of the *wh*-word represent a percentage of 12.69 %, whereas the least number of errors were made in misformation of the operator and predicator.

In the following step, we analyzed each type of errors from the most common to the least to find out the precise errors made in each category. Within 83misordering errors, there are two types of errors; absence of aux/ model –subject inversion and ill-formed questions. The following pie chart an illustration of that.
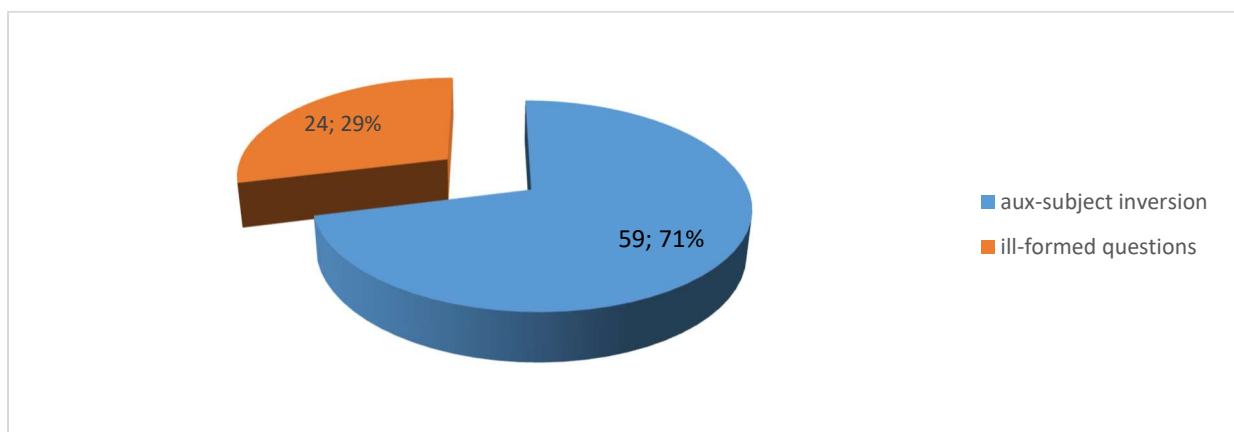
Pie chart3.4. Frequency of misordering errors in questions with inversion

What has been noticed from the previous results is that the learners did not know the correct order of words in questions; namely how to invert the auxiliary or model with the subject and the necessity of keeping the original form of main verbs. This is clearly noticed in the total number of these errors (59 errors out of 83) that represents the highest percentage (72.08%). These are some examples: (- Why **it** is forbidden to kill whales? -What he **is** studying? – What people **should** protect? – How many books Helen **has** read). In some cases, learners put the verbs before the subject. Within 59 errors, there were 07 verb inverted errors representing a percentage of (11.86%). These are some examples (-What **is studying** he? - Where **is found** violence? - Where √ **found** violence? - How √ books **has read** Helen?). The next common error type is ambiguous questions in 24 ill-formed questions in a percentage of (28. 91%). Some illustrating questions are as follows. (- Where has been she was a child? – Forbidden he is to kill whales? - Why forbidden kill whales? – How has read the books Helen? –What you should people?).

Omission errors consist of omission of operators, predicators, subjects and other words in the questions. In the following pie chart, the types of errors made when omitting elements in the questions are presented according to their frequency.
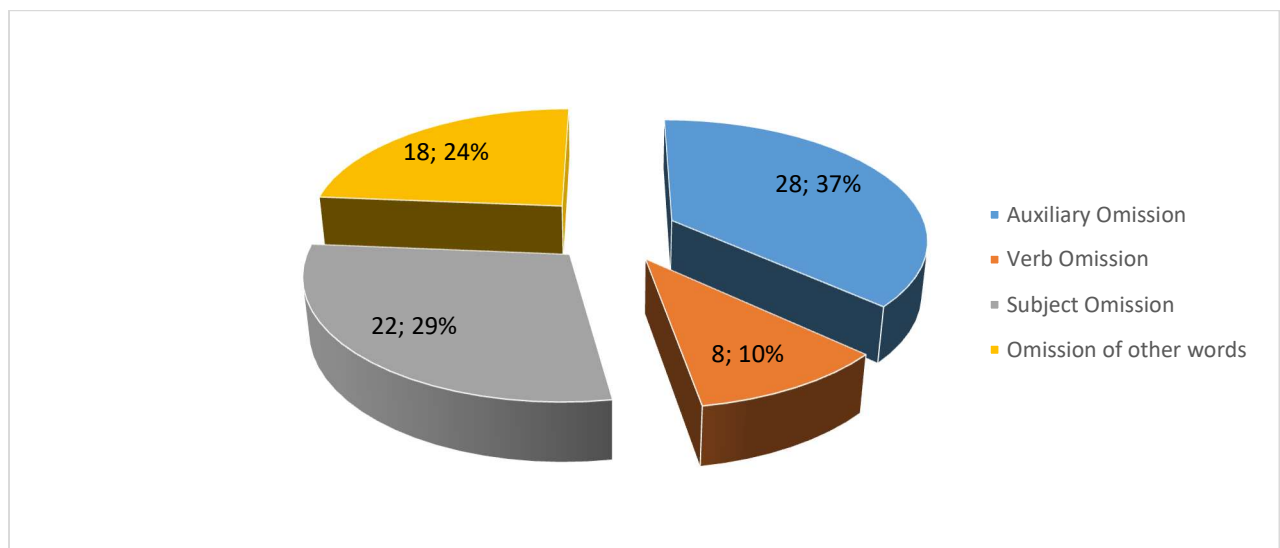
Pie chart3.5. Frequency of omission errors in questions with inversion

The total number of omission errors was found to be 76 errors. The most common error type committed in such type was the omission of the auxiliary or model verb in a high number of errors (28) that presents the highest percentage (36.84%). Some of such erroneous questions produced by the respondents are as follows (- Where √ **the** violence found? - Where√ she been √? - What √ **the** people protect? - **How much** √ Helen read books?). There were 22 errors of subject omission representing the next most common error type in a percentage of 28.94%. These are some examples: (-Where has √ been since she was a child? - Why is √ forbidden to kill whales? - What is √ studying? -What **he** should √ protect?). The omission error of other words was identified to be the third most common error type in a percentage of 23.68 % (18 errors out of 76). These are some samples of erroneous questions: (- Why √ √ forbidden √ kill whales? → **What** is **the** forbidden√? –Where √ she been √**?**). The participants made 08 errors of predicator omission representing a proportion of 10.52%. These are some erroneous questions produced by them: (- What should people √ **do**? -Where **is** she √ since she was a child?).

Within 40 errors of addition, three types of errors were identified; be redundancy, do redundancy, and unnecessary insertion of words. The frequency of these types of errors is shown as follows.
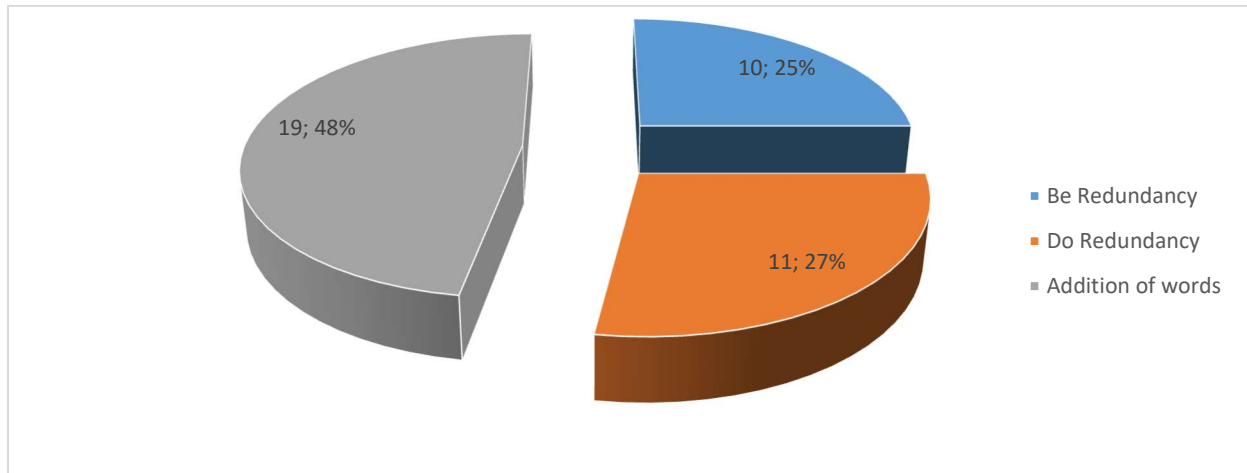
Pie chart 3.6. Frequency of addition errors in questions with inversion

Based on the data above, addition of words which are not required represents the highest rate (19 errors). Pupils generally added the definite article 'the' 14 times as shown in these questions: What √ **the** people protect? Where is **the** violence found? Why **the** forbidden to kill whales?). The other errors of additions of words are the insertion of the underlined words targeted for the questions and 'to' before verbs as shown in these examples: (How many books *have* Helen **to** read? What should people **to** protect?). However, the unnecessary insertion of the auxiliaries 'to be' and 'to do' represents the next common errors in approximately similar numbers (10 and 11 respectively). These are some examples of these categories: (What'**s** he *is* studying? - Where **are** she *has* been since she was a child? – What **did** he *is* studying?).

Misselection errors are restricted to the wrong choice of the *wh*-words and they were found to be 32 out of 252 errors. Their frequency is shown in the following table.

Wh-words		Where	why	what	How many
Incorrect-words	**Frequency**	09	06	03	14
	percentage	28.12%	18.75%	9.37%	43.75%

Table 3.10. Frequency of the incorrect wh-words in questions with inversion

The table above presents the frequency of the incorrect use of *Wh*-words. It can be seen that learners had a difficulty to ask questions about numbers using (How many…) since it represents the highest percentage (43.75%). They found it difficult to ask questions about place and reason as they form the next most common errors in percentages 28.12% and

18.75% respectively. These are some examples: (How long time she is in London? When do violence is found? - How much did Helen read? – How Helen has read?).

Misformation errors found in the participants' responses fell into two categories; misformation of operator and misformation of predicator. This is going to be illustrated in the following pie chart.
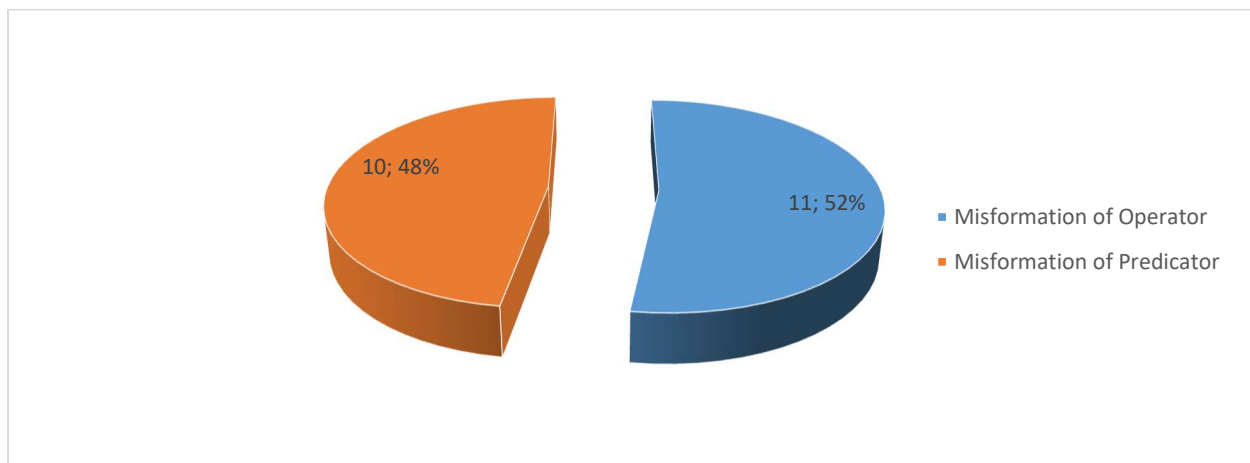
Pie chart3.7. Frequency of misformation errors in questions with inversion

Within 21 errors of misformation, the two types of errors were in the same percentages. Some erroneous questions are shown as follows. (- How many books **have** Helen *to* read? - Where *we* **founded** violence? – Where **did** she **be** since she was a child?).

To determine the most common errors that the participants committed in constructing questions that need inversion containing either an auxiliary or a model verb, the following analysis was conducted. Depending on the data provided previously, the most common errors have been identified and classified according to their frequency from the most common to the least as follows.
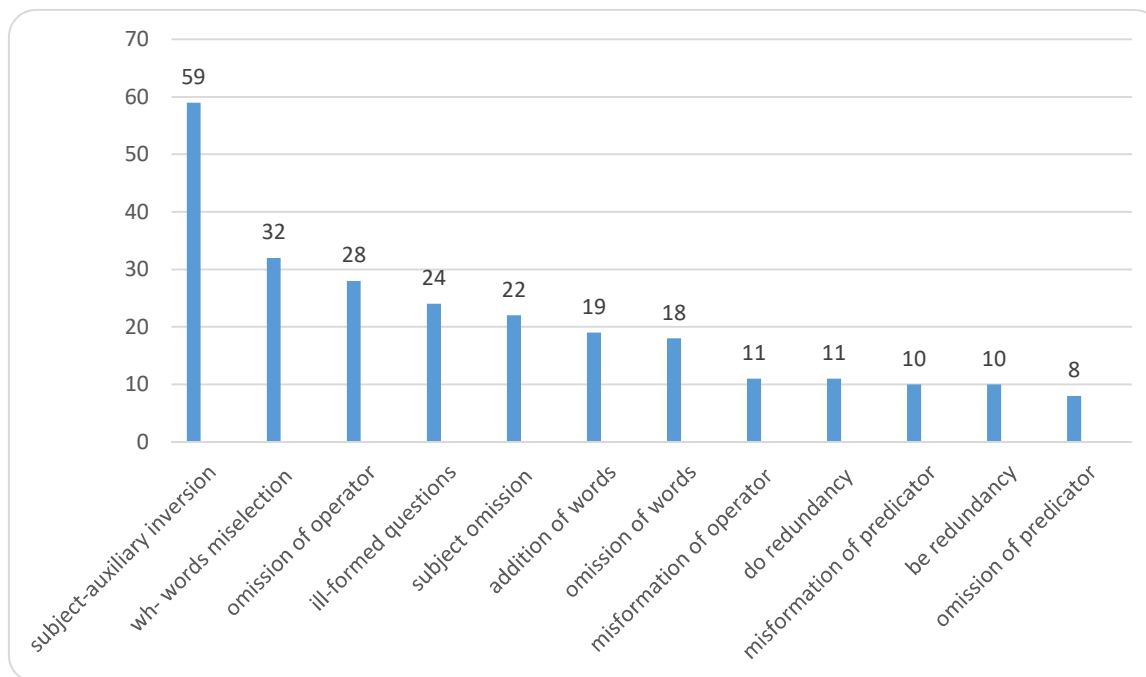
The bar graph 3.4. The frequency of errors in constructing wh-questions with inversion

The respondents made 252 errors in total when constructing wh-questions with inversion. The bar graph above provided data about the types of error committed by those participants in forming such type of questions. It shows that the most difficult aspect among those learners was subject-auxiliary inversion since it presents the highest percentage. The next most common error type was the misselection of the wh-words suitable for the questions, mainly the interrogative word 'How many'. The third frequent error category was omission of the operator. However, the participants constructed 24 ill-formed questions and omitted subjects 22 times. The unnecessary insertion of words and the omission of words from the questions represented the next error types in approximately similar rates (19 and 18 respectively). However, the unnecessary insertion of the auxiliaries 'to be' and 'to do' and misformation of operator and predicator represented the next common errors in approximately similar frequency of occurrence (10 and 11). Omission of predicator was found to be the least common error in such type of questions.

In the following step, an attempt to find out the types of errors made by the participants when forming questions that need 'do' support was done.

3.2.6.4. Types of Errors in Questions with 'do' Support

If the sentence does not contain an auxiliary verb, a modal verb, or copula *be,* interrogative word is placed at the initial position of the sentence followed by '*do'* insertion

(either '*do*', '*does*' or '*did*') according to the tense of the verb and a change of the verb into the infinitive form. The questions produced by the participants were studied and coded depending on whether these features were correctly used or not. The frequent errors found in the learners' responses to ask this type of questions were analyzed under five broad categories, namely omission errors, addition errors, misformation errors, misordering errors and misselection errors.

There are seven questions that need '*do*' support. They are as follows.

Q1-   How long ago did Kareen go to USA? →Kareen went to the United States of America **three years ago.**

Q2-   When did Hong Kong revert to China? →Hong Kong reverted to China **in 1997.**

Q9-   How do my parents feel after work? →My parents feel **tired** after work.

Q11-   Which jacket does Lila like to wear? → Lila likes to wear **the green jacket,** not **the black** one.

Q12-   Whom/who did my father meet yesterday? →My father met **the headmaster** yesterday.

Q14-   How often do children brush their teeth? → Children brush their teeth **twice a day**.

Q21-   What does child labour mean? →Child labour means **work for children that harms or exploits them.**

In a total of 133questions, 26 questions were avoided to be answered. Within 106 wrong questions, the participants committed 307 errors. The errors identified can be broadly classified into the aforementioned categories. The following table displays the frequency of each one.

Type of errors	Frequency of errors	Percentage
Omission errors	75	24.42%
Addition errors	26	8.46%
Misformation errors	91	29.64%
Misordering errors	32	10.42%
Misselection errors	83	27.03%

Table3.11. Frequency of errors types committed in questions with 'do' support

Within 307 errors, misformation errors represented the most common error type in a percentage of 29.64 %. The next most common type of errors was misselection of *wh-* words in a percentage of 27.03 %. Omission errors were found to be the third common type in a percentage of 24.42 %. However, errors of misordering and addition types errors occurred in approximately similar proportions 10.42 % and 8.46 % respectively.

From the data obtained, misformation errors in such type fell into two main categories; misformation of operator and misformation of predicator. The following pie chart shows the error frequency for misformations.
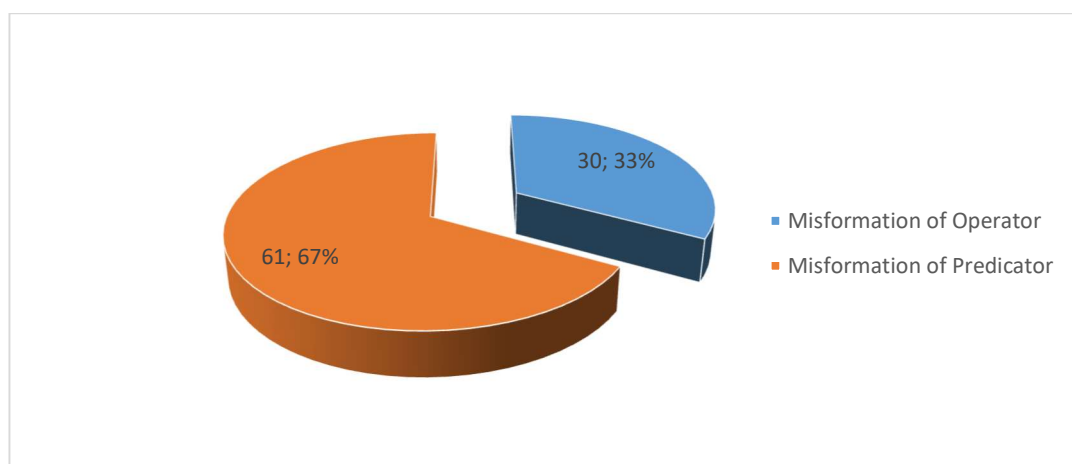
Pie chart3.8. Frequency of misformation errors in questions with 'do' support

Within 91 errors, misformation of predicator formed the highest rate (61 errors). Most of time, the learners did not put the verb in the infinitive form. These are some examples: (*When* did Hong Kong **reverted** to China? –What √ child labour **means?** - *What* √ my father **met** yesterday?). However, the next most common errors of misformations were

those of the operator. These are some erroneous questions:(-How **did** my parents feel after work? -When **do** Hong Kong *reverted* to China? –*What Is* **do** my father *met* yesterday?).

Misselection errors are restricted to the wrong choice of the *wh*-words. They represented the next most common errors type and they were found to be 83 out of 307 errors. Their frequency is shown in the following table.

Wh-words		How long ago	When	How	What	Which	Whom	How often
Incorrect wh-words	*Frequency*	16	05	13	03	18	12	16
	percentage	19.27%	6.02%	15.66%	3.61%	21.68%	14.45%	19.27%

Table 3.12. The frequency of the incorrect wh-words in questions with 'do' support

The table above presents the frequency of the incorrect use of *wh*-words. Depending on the data obtained, learners had a difficulty in using the interrogative word (Which+ a noun) since it represents the highest percentage (21.68%). The next most common errors in the incorrect choice of wh-words were in the failure of using (How long ago and How often) in a percentage of 19.27*%*. This confirms the previous findings in the miselection errors in the previous type of questions. The misselections of the interrogative words 'how' and 'whom' represented the next most common errors in percentages 15.66% and 14.45% respectively. However, the wrong choice of 'when' and 'what' were made 05 times and 03 times respectively. These are some of the erroneous questions produced by the respondents: (- Since when Kareen went to USA? - What did your parents feel after work? - What the children brush their teeth? - When Kareen went to USA? - What's met my father yesterday? How much does Kareen went to the United States of America? - How long time Hong Kong reverted to China?).

Errors of omission found in the respondents' questions can be omission of operator, main verb, subject and the omission of words from the lexical items used in the questions. The following pie chart illustrates clearly the frequency of each type.
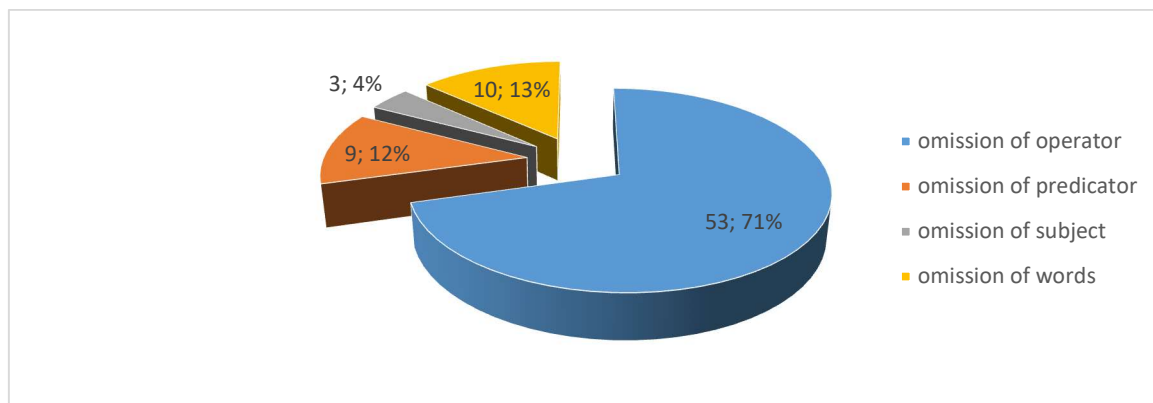
Pie chart3.9. Frequency of omission errors in questions with 'do' support

The total number of omission errors was found to be75 errors. The most common error type committed in such type was the omission of the operator; that is the auxiliary verb 'to do' in a high number of errors (53) that presents the highest percentage (71%). Some of such erroneous questions produced by the respondents are as follows (- When √ Hong Kong revert to China? -How much years √ Kareen went to USA? - What √ child labour means?). The omission error of other words and predicator 'the main verb' were identified to be the next most common error types in percentages of 13% and 12%. Respectively. These are some samples of erroneous questions: - When √ Hong Kong reverted √**?** What's the colour favorate for Lila? – When √ children brush their √? And How did Kareen √ to USA? –What did my parents √ after work?). There were just 03 errors of subject omission representing the least common error type in a percentage of 4 %. These are some examples: (-What is √ like to wear? –What does √ met yesterday?).

Misordering errors fell into three categories; the absence of the operator-subject inversion, the verb preceding the subject and ill-formed questions. The frequency of each category is shown in the following pie chart.
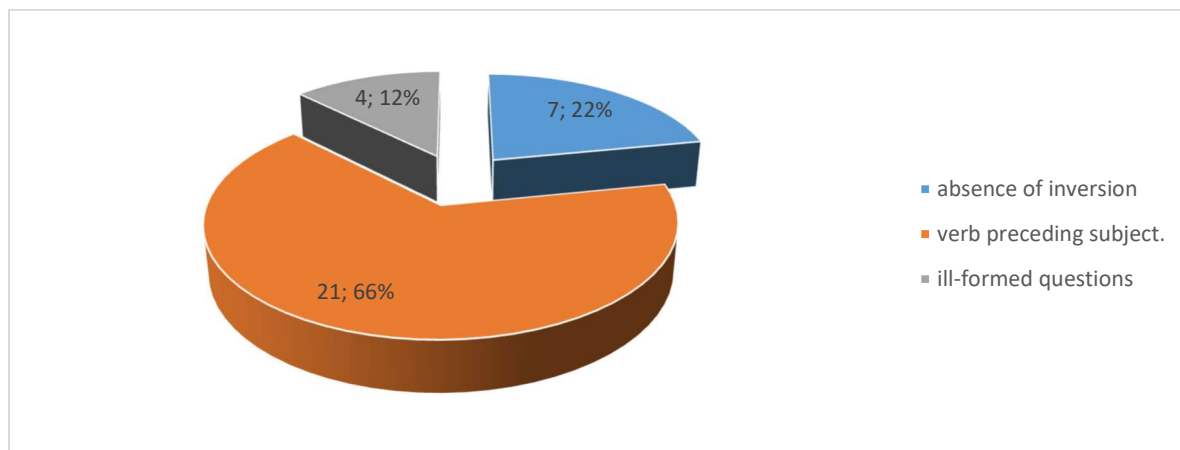
Pie chart 3.10. Frequency of misordering errors in questions with 'do' support

Within 32 errors of misordering, putting the verb before the subject to form the question represents the highest rate of errors in a percentage of 66% (21 errors out of 32). These are some examples: <u>What **brush** children their teeth? Who **met** your father yesterday? How **feel** my parents after work? - What **means** child labour?</u>

The absence of the auxiliary- subject inversion represents the next common error type in a percentage of 22% (07 errors out of 32). Some erroneous questions are as follows. - <u>What **have feel** you parents after work? –What **is met** my father yesterday?</u>

The least common error type is ill-formed questions in a percentage of (12%).These are some illustrating questions: (- When the United States of America Kareen? – How much the United States of America do? – Which since reverted to Hong Kong? - How does tired after work?).

Errors of additions consist of addition of 'to be', 'to do' and other words rather than the original words of the questions. The following pie chart displays the frequency of each one.
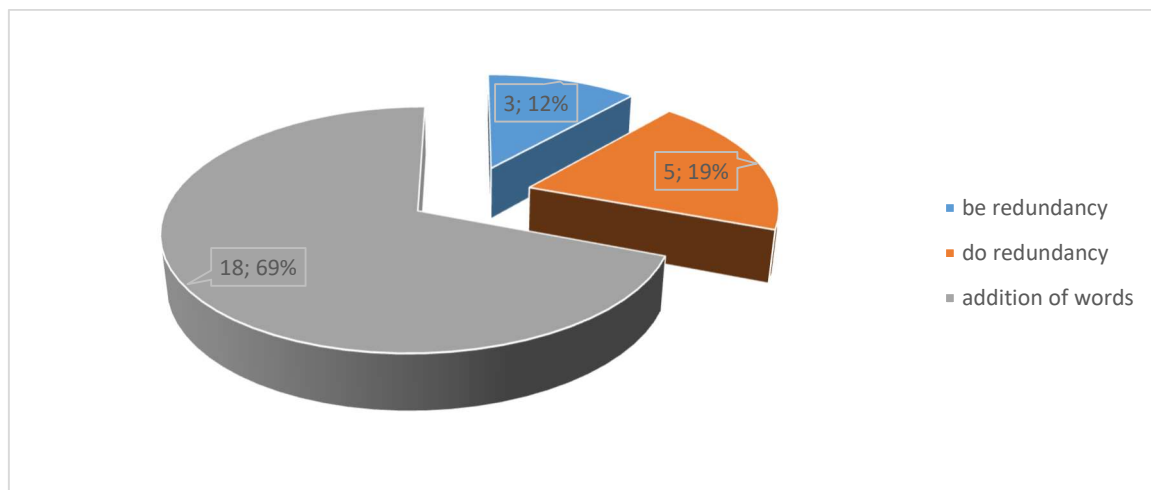
Pie chart3.11. Frequency of addition errors in questions with 'do' support

Depending on the results above, addition of words which are not required represents the highest rate (18 errors) in a percentage of 69%. The participants added the underlined words intended for the questions09 times as shown in these questions: Lila likes to wear **the green jacket,** or **the black** one? – When have meet your father **the headmaster**? _ How does **tired** after work?). The other errors of additions of words are the unnecessary insertion of the auxiliaries 'to do' and 'to be' in approximately similar percentages 19% and 12% respectively (05 and 03out of 26 errors). These are some examples of these categories: (What **is** parents feel **do** after work? - What **is been** parents feel after work? – What **is do** Lila likes to wear?).

To identify the most common errors that the participants committed in constructing questions that need 'do' insertion, the following analysis was conducted. Depending on the data provided previously, the most common errors have been identified and classified according to their frequency from the most common to the least as follows.
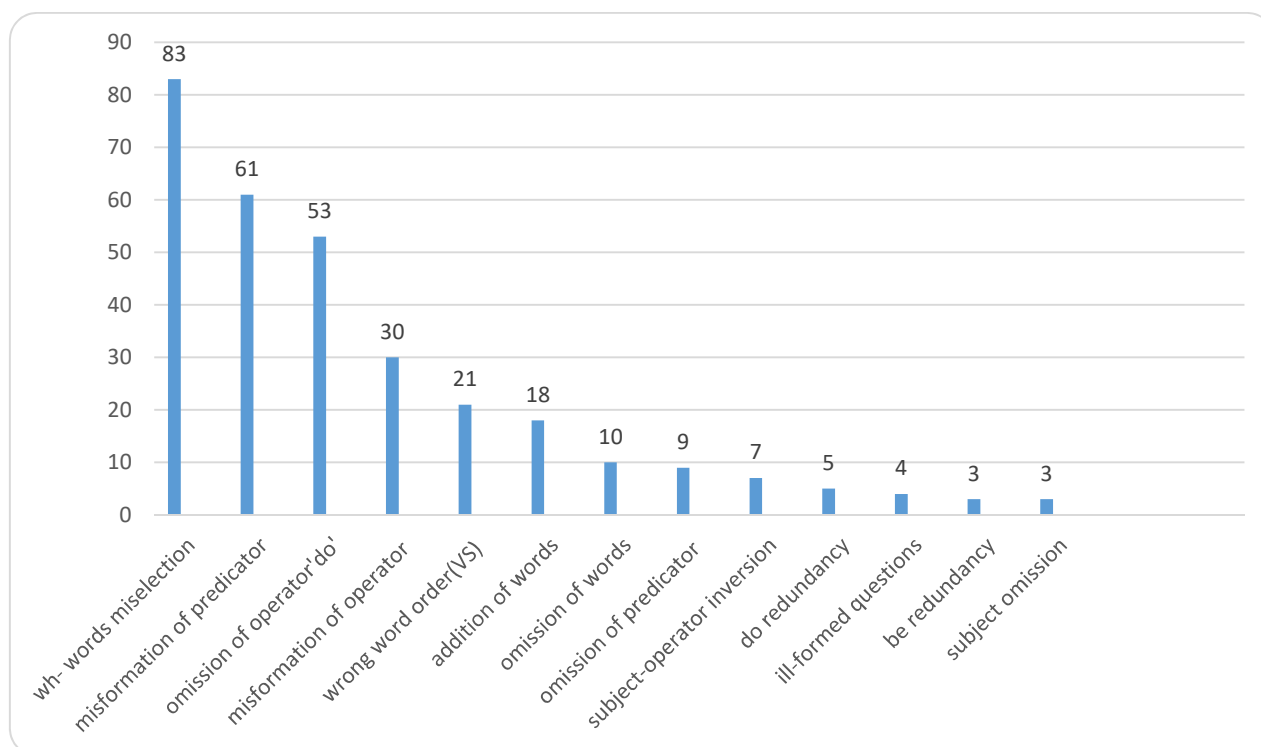
bar graph:3.5. The frequency of errors in constructing wh-questions with 'do' support

The bar graph above gave information about the types of error made by the pupils in forming such type of questions. The respondents made 307 errors in total when constructing wh-questions that need 'do' insertion. It is obvious that the most difficult aspect among those learners was the wrong choice of the *wh*-words suitable for the questions since it presents the highest percentage, mainly the interrogative words 'which' and 'how + adjective/adverb'. The next most common error type was the misformation of the main verb; namely the necessity of putting the main verbs in the infinitive form. However, it was omitted just nine times out of 307 errors. The third frequent error category was omission of the operator 'do'. Even if they used it, they found difficulties to put it in the correct tense form. This represents the next most common error type. The learners did not know the correct order of words in questions. This occurred in verb inverted errors which is the next most common error type. The unnecessary insertion of words mainly the underlined words targeted for the questions occurs eighteen times in the learners' responses. However, there are ten errors of omission of words existing in the questions and seven errors of do – subject inversion. The unnecessary insertion of the auxiliaries 'to be' and 'to do', ill-formed questions and omission of subjects represented the least common errors in approximately similar frequency of occurrence.

In the following step, an analysis to find out the types of errors made by the participants when forming questions with 'What + a form of do' was conducted.

3.2.6.5. Types of Errors in Questions with '*What + a form of do*'

This type of questions is used to ask about activities and it follows the same patterns of questions with 'do' support. The difference is in the insertion of the verb 'do' instead of the main verb in its right form according to the given tense. The questions produced by the participants were studied and coded depending on whether these features were correctly used or not. The frequent errors found in the learners' responses to ask this type of questions were analyzed under five broad categories, namely omission errors, addition errors, misformation errors, misordering errors and misselection errors.

There are six questions **with '*What + a form of do*'**. They are as follows.

Q10-   What **do** the girls **do**? →The girls **watch a Turkish serial.**

Q15-   What **had** the football team **done** several times? → The football team **had won the match** several times.

Q16-   What **was** he **doing**? → He **was painting a nice picture.**

Q17-   What **should** people **do**? → People **should respect each other.**

Q19-   What **does** this girl **do** there? →This girl **sells newspapers** there.

Q23-   What **did** Arabs **do**? →Arabs **conquered many rich provinces**.

Within 114questions, 37 questions were avoided to be answered. In a total of 77 questions, the participants committed 234 errors. The errors were identified and classified into the same aforementioned categories. The following table displays the frequency of each type.

Type of errors	Frequency of errors	Percentage
Omission errors	85	36.32%
Addition errors	43	18.37%
Misformation errors	57	24.35 %
Misordering errors	39	16.66%
Misselection errors	10	4.27 %

Table 3.13. Frequency of errors types committed in questions with 'what + a form of 'do'

Within 234 errors, omission errors represented the most common error type in a percentage of 36.32 %. The next most common type of errors was misformation errors in a percentage of 24.35%. Errors of addition and misordering were found to be the third common type in approximately similar percentages (18.37 % and 16.66 % respectively). However, misselection of *wh*-words seems to be less difficult among those learners since the total number of errors was10 in a percentage of 4.27 %.

Depending on the test analysis, omission errors in such type fell into four main categories; omission of operator, predicator, subject and omission of lexical items exist in the questions. The following pie chart displays the frequency of their occurrence.
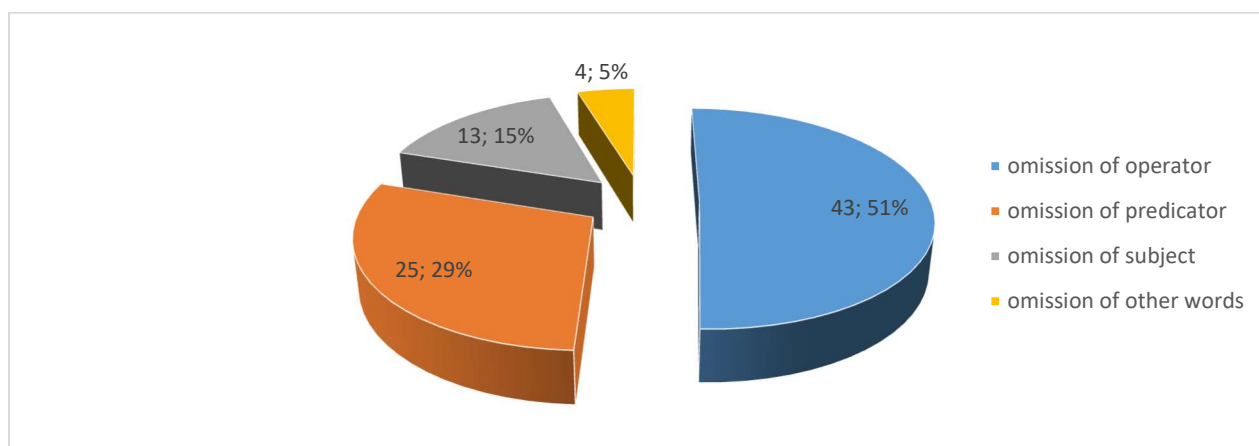
Pie chart3. 12. Frequency of omission errors in questions with (what + a form of 'do')

The total number of omission errors was found to be 85 errors. The most common error type committed in such type was the omission of the operator in a high number of errors (43) that presents the highest percentage (51%). Some of such erroneous questions produced by the respondents are as follows (- What √ the girls watch? Instead of What ***do*** the girls **do**?

- What √ **do** people? Instead of What **should** people **do**? - What √ the football team √ several times? Instead of What **had** the football team **done** several times? In this example both of the operator and predicator are omitted. There were 25 errors of the main verb omission representing the next most common error type in a percentage of 29 %. These are some examples: (-What was he √? instead of What was he ***doing***? - What should people √? - What **did** the football team √ several times?). The subject omission errors were identified to be the third common error type in a percentage of 15% (13 errors out of 85). These are some samples of erroneous questions: (- What do √ painting? And What is √ doing? Instead of What was **he** doing? – Where √ she been √**?**). The least common type of errors seems to be the omission of existing words in the questions representing a proportion of 5 %. These are some erroneous questions produced by them: (What √ the football team √ √ √? Instead of What had the football team done ***several times***? -What **do** this girl**s** √ √? Instead of What **does** this girl **do there**?).

Errors of misformation found in the respondents' questions consist of misformation of the auxiliary verb 'to do', the wh-words and the main verb in two ways; replacing it by a form of 'do' but in a wrong form or keeping the original verb instead. The following pie chart shows the error frequency for misformations.
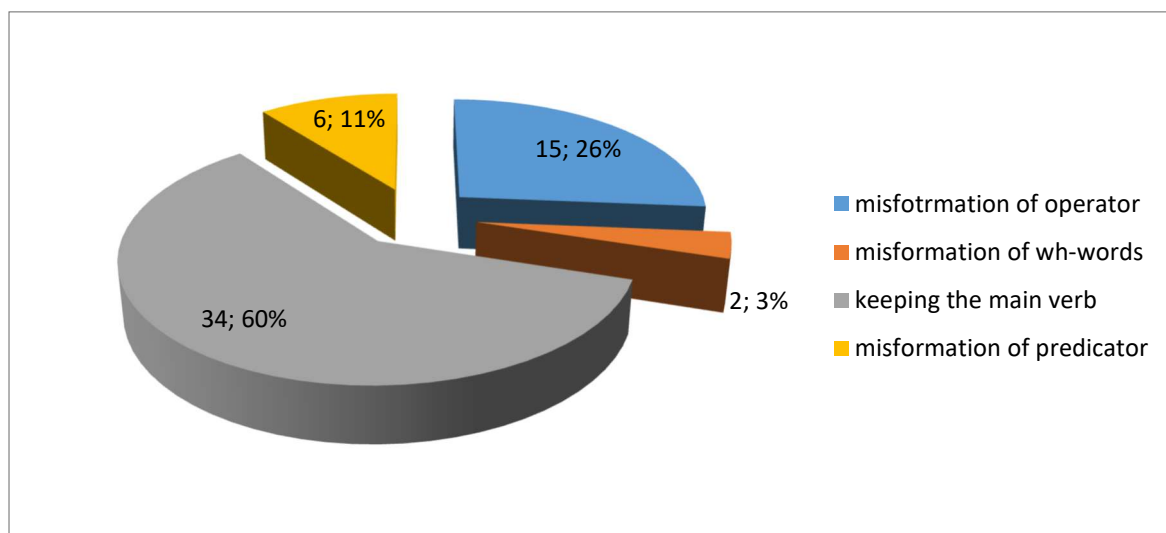
Pie chart 3.13. Frequency of misformation errors in questions with (What + a form of 'do')

Within 57 errors, misformation of predicator formed the highest rate (40 errors) in a percentage of 71%. Most of errors in a percentage of 60% were the absence of supplying the

verb 'to do' instead of the main verb. However, there were 06 errors in a percentage of 11% in which the participants replaced the main verb with a form of 'do' but in a wrong form. These are some examples of these two types of errors:(What is he **_do_**? Or What √ he was **_paint_**? Instead of What was he **_doing_**?   -What is √ girls **_doing_**? Instead of What do the girls **_do_**? – What should people **_protect_**? Instead of What should people **_do_**?). The next most common errors of misformations were those of the operator. These are some erroneous questions: (What **does** she do? Instead of What **do the girls** do? - What **do** this girl do? Instead of What **_does_** this girl do? -What **_did_** he paint? Instead of What was he doing? What'**_s_** the girls do? Instead of What **_do_** the girls do? and What **_are_** the people do? instead of what **_should_** people do?).

Within 43 addition errors, four types of errors were identified; 'be' redundancy, 'do' redundancy, addition of other words and addition of the underlined words intended for questions. The following pie chart is an illustration of that.
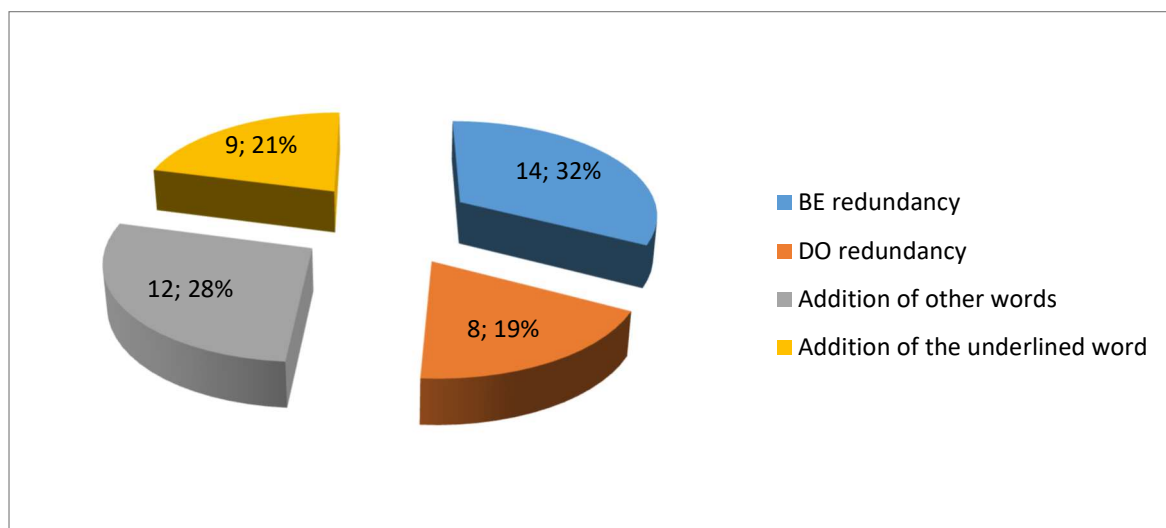
Pie chart 3.14. Frequency of addition errors in questions with (What + a form of 'do')

Based on the data above, the unnecessary insertion of the auxiliary 'to be' represents the highest rate of errors (14 errors out of 43 in a percentage of 32%).These are some examples of these erroneous responses:(What **_is_** √ the football team√? - What **_are_** does Arabs√? – What**_'s_** do the girls √?). Addition of words which are not required represents the next most common errors from which the insertion of the underlined words targeted for the questions were found to be 09 errors out of 43 in a percentage of 21%. Some of these wrong questions are as follows: (How√ Arabs **_conquered rich provinces_**? What did Arabs **do**? And

- How many time <u>have</u> the football team **_won the match_**? Instead of what had the football team done several times?). However, the unnecessary insertion of the auxiliary 'to do' represents the next frequent errors in a percentage of 19%. These are some examples of these category: (What <u>is</u> **_do_** the football team<u>√</u>? - What <u>is</u> **_do_** people? - What <u>are</u> **_does_** Arabs <u>√</u>?).

Within 39misordering errors, there are three types of errors; absence of aux-subject inversion, ill-formed questions and verb inverted errors. The following pie chart is an illustration of that.
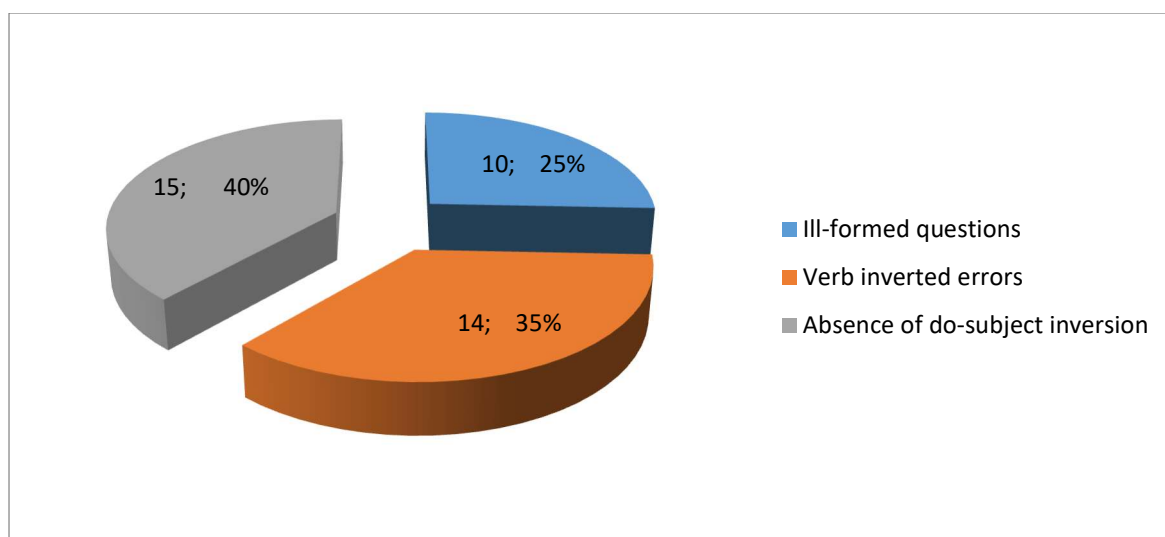
Pie chart 3.15. Frequency of misordering errors in questions with (What + a form of 'do')

As it is obvious above, the absence of do-subject inversion represents the highest rate of errors in a percentage of 40% (15 errors out of 39). These are some examples: (- What he **<u>was</u>** doing? -What he **<u>was</u>** painting? - What people **should** doing?). Putting the verb before the subject to form the question represents the next most common type in a percentage of 35% (14 errors out of 39). These are some wrong questions: (- What **_conquered_** Arabs? - What **_sells_** this girl there? – What **<u>watch</u>** the girls? What **_do_** this girl?). The next common error type is ill-formed questions in a percentage of (25%).These are some illustrating examples: (- What she do he? – What she is the girls? - What she do the girls? – What do painting? – What they should respect a people?).

As it is obvious in the questions of this type, 'what' is the only interrogative word used. Misselection errors of the wh-words represented the least common errors type among the participants and they were found to be 10 errors out of 234errors in a percentage of 4.27%.

The following analysis is an attempt to determine the most common errors that the learners committed in constructing questions that need 'do' insertion with 'what + a form of do'. Based on the data provided previously, the most common errors in such type of questions have been identified and classified according to their frequency from the most common to the least ones.
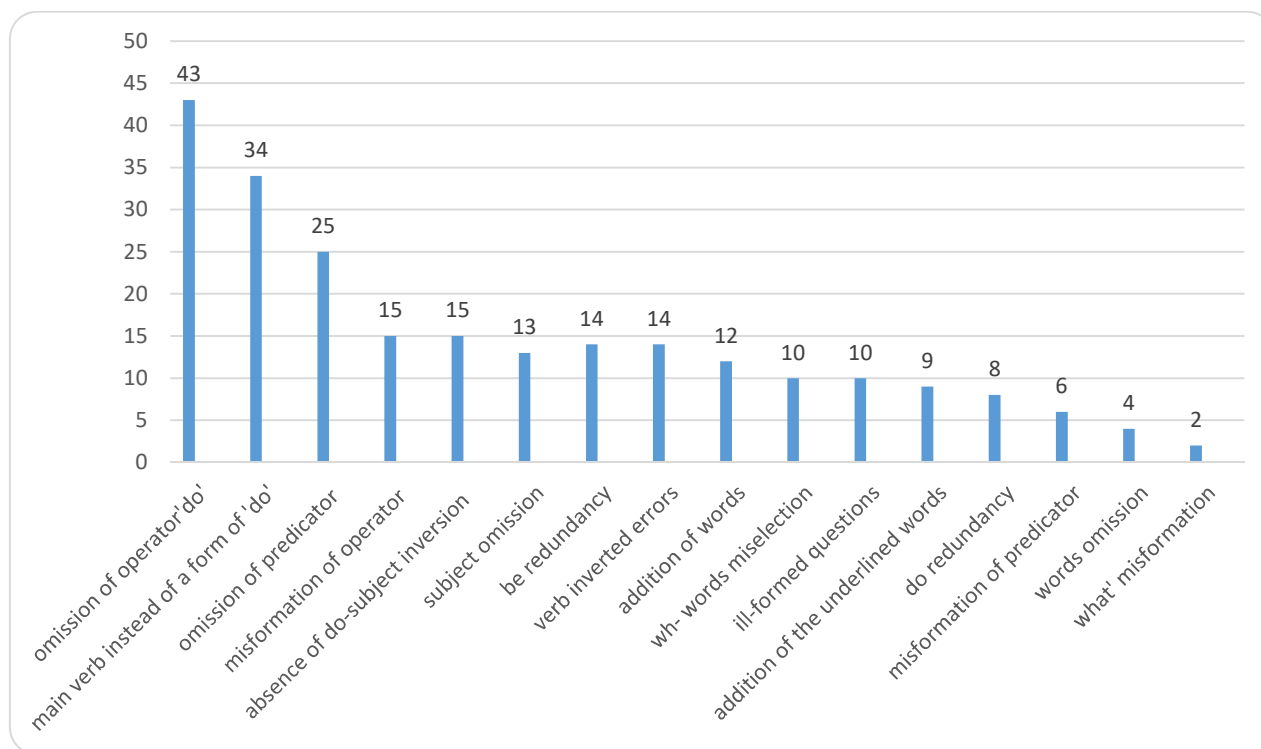
Bar graph 3.6. The frequency of errors in constructing wh-questions with (What + a form of 'do')

The data provided above determines the types of error made by the target learners in forming such type of questions. The participants made 234 errors in total when constructing wh-questions that need 'do' insertion but with 'what + a form of 'do''. It is clear that the most difficult aspects among those learners were the omission of the operator 'do' and keeping the main verb instead of inserting 'to do' in the right form in approximately similar rates. The next most frequent category of errors is the total omission of the main verb. The use of the auxiliary 'to do' presents a difficulty for those learners. Even if they used it, they found difficulties to put it in the correct tense form. This represents the next most common error type in similar percentages as errors of do-subject inversion. The next frequent errors were those of subject omission, be redundancy and verb inverted errors in similar frequency of occurrence. The unnecessary addition of words mainly the underlined words intended for the

questions presents the next common errors type. The following ones are ill-formed questions and the wrong choice of the *wh*-word in spite of the fact that the only *wh*-word used in this type of questions is the simplest one 'what', in addition to the unnecessary insertion of 'to do' that occurred eight times. However, there are other errors but in small proportions; namely misformation of predicator, unnecessary insertion of words and 'what' misformation.

The previous analysis has focused on the errors made by the learners who got less than the passmark to pinpoint areas of their difficulties. However, a similar analysis will be done to get an overall overview of the main areas of weaknesses and problems of the exceptional learner who got 11.25 points out of 20.

3.2.7. Percentages of Correct Questions of the exceptional pupil.

Out of 460 questions, 36 were correct answers. This pupil had 08 right questions within these answers without any error at all in a percentage of 22.22%. They differed in their frequency. This is what has been shown in this table.

N	Questions	Number	Per cent %
01	How long ago did Kareen go to USA?	0	0 %
02	When did Hong Kong revert to China?	1	2.77 %
03	Where has she been since she was a child?	0	0 %
04	Why is it forbidden to kill whales?	0	0 %
05	Who answered all the questions correctly?	0	0 %
06	Whose mother is Russian?	0	0 %
07	What is he studying?	0	0 %
08	What is important?	0	0 %
09	How do my parents feel after work?	0	0 %
10	What do the girls do?	0	0 %
11	Which jacket does Lila like to wear?	0	0 %
12	Whom/who did my father meet yesterday?	0	0 %
13	How many books has Helen read?	1	2.77 %
14	How often do children brush their teeth?	0	0 %
15	What had the football team done several times?	1	2.77%
16	What was he doing?	0	0 %
17	What should people do?	1	2.77 %
18	How was George's grandfather?	0	0 %
19	What does this girl do there?	1	2.77 %
20	What should people protect?	1	2.77 %
21	What does child labour mean?	1	2.77 %
22	Where is violence found?	0	0 %
23	What did Arabs do?	1	2.77 %
	Total number	08	22.22%

Table 3.14. Percentages of Correct Questions of the exceptional pupil.

Based on the data obtained above, 22.22 % correct questions were the sentence types as 'When did Hong Kong revert to China?' and 'What does child labour mean?' which were classified under the same form, 'How many books has Helen read?' and 'What should people protect?' under another form, and these four questions that represent another structure: 'What had the football team done several times?', 'What should people do?', 'What did Arabs do?' and 'What does this girl do there?'. Therefore, the percentage of 22.22% correct questions were nearly made of three main sentence types "When/what+ 'to do'+ subject +verb + stem?" in a percentage of   5.54 % And "what/ How many… + 'aux/ modal verbs + Subject + main verb+ stem?" "How + be+ stem?" in proportion of 5.54 %. However, the highest proportion seems to be in the case of forming *wh*-questions with (what + a form of 'do' in percentage of 11.08%.

However, this pupil failed to supply complete correct responses in questions 1, 3, 4,5, 6, 7, 8, 9, 10, 11, 12, 14, 16, 18 and 22 in spite of the fact that they share the same characteristics of structures with the correct responses. This is clearly illustrated in the following table.

Types of questions	Number of answers in the test	Number of correct answers
Questions without inversion using ' who'	01	00
Questions without inversion using ' what'	01	00
Questions without inversion using ' whose'	01	00
Questions with inversion (copula 'be')	01	00
Questions with inversion (aux. ' be')	03	00
Questions with inversion (aux. ' have')	02	01
Questions with inversion (model verb)	01	01
Questions with 'do' support	07	02
Questions with (what + do?)	06	04

Table 3.15. *Frequency of her answers compared with those of the test depending on structures types.*

The questions displayed in the previous table were classified depending on their different structures. What can be seen is that in the same category, this learner answered some questions correctly and failed in others though they share the same features, namely Questions with inversion (using the auxiliary 'to have'), Questions with 'do' support and Questions with (what + a form of 'do'?). To find an answer to this, we attempted to study the participant's responses one by one under these categories for the purpose of finding out the main areas of her weaknesses and difficulties and through identifying the grammatical errors.

The grammatical errors found in this study were examined under the categories of the surface structure taxonomy of errors suggested by Dulay et al (1982) and James (2010) and which have been mentioned previously.

3.2.8. Types of Errors Recorded from the exceptional pupil's test

When the teacher knows what exactly the learner knows and doesn't know about this particular topic, she can focus on the areas the pupil needs to learn about rather than what she has already known. For this pupil, the analysis of her paper provides information for individualized instruction. Hence, in this stage her responses were analyzed to pinpoint areas of difficulties that are reflected in the errors she committed.

The analysis indicated various grammatical errors but not too much. These grammatical errors were identified and used in a form of abbreviations. The following table is an illustration of these keys.

Abbreviation	Full words	Explanation
WT	Wrong Tense	**P**upils used wrong tense instead of the correct one.
WFV	Wrong Form of Verb	**T**ense was correct but the verb form was wrong.
WQW	Wrong Question Word	**W**rong question word was used.
Aux-O	Auxiliary Omission	Auxiliary was omitted.
WF-Aux	Wrong Form of Auxiliary	**T**ense was correct but the auxiliary form was wrong.
WWO(inv)	Wrong Word Order (no inversion)	The question form was wrong, there was no inversion of auxiliary and subject.
WWO(VS)	Wrong Word Order (The	The question form was wrong, the verb

	verb preceded the subject)	preceded the subject.
WWO	Wrong Word Order	The words were not in the right order.
WO	Word Omission	Necessary words were omitted from the questions.
UIW	Unnecessary Insertion of Words	Pupils inserted other words which they did not require them.
W-Rw	Word instead of a word	Pupils replaced a word with another word.

Table 3.16. Abbreviations of Error Types (adapted from Mungungu, 2010)

In the following table, the types of errors made to do such task are presented according to the number of their frequency with some illustrating examples:

Examples of error identified	Definition of error type	Number
*__*Whom__ mother is Russian?* **(Whose)** *__*How many time__ do they brush their teeth?* **(How often)**	QW	05
*Since whene √ Kareen **went** to USA? *Who √ **met** your father yesterday?	Aux-O	02
*What **did** your parents feel after work? *How **do** your parents feel after work? **(tired)**	WT	01
*Since whene √ Kareen ***went*** to USA? *What ***does*** she **do**? (What ***do*** the girls **do**?	**WFV/** **WF-Aux** **W-Rw**	2 1 1
*When she ***has*** **been** since she was a child? *What he ***was doing***?	**WWO(no inv)**	04
*Who ***met*** your father yesterday? *(Who/ whom ***did*** your father ***meet*** yesterday?)	**WWO(VS)**	01
Who answered all the questions **correctly?**	**WO**	01
*What is **the** important? *(What is important?)	**UIW**	03

Table 3.17. Frequency and Examples of Error Types

The total number of errors was found to be 21 errors. What has been understood from the previous table is that the learner did not use the correct wh-words to ask 05 particular questions since they used the wrong words instead of the correct ones. This is clearly noticed in its frequency of occurrence that presents the highest one. The next most common error type is the absence of auxiliary/verb inversion in a number of errors (04). The third frequent error type was the unnecessary insertion of (03) words namely 'the' and 'it'. The next most common error type was auxiliary omission and wrong form of the main verb in the same two sentences in which she should insert 'do' and put the verb in the infinitive form. The other errors were the omission of the word 'correctly' or replacing the word 'the girls' by 'she', the use of the wrong tense and form of the auxiliary, and finally the wrong position of the main verb in which the verb preceded the subject.

To get more detailed idea about these errors, in this step the frequent errors were analyzed according to the different types of questions depending on their different structures and under the five broad categories used previously, namely omission, addition, misformation, misordering and misselection errors.

*First: Questions without inversion (Asking about the subject)

These are the pupil's answers:

a- Q5:   Who answered all the questions? Instead of (Who answered all the questions **correctly**?)
b- Q8:   What is **the** important? Instead of (What is important?)

In these two questions, the pupil made two errors. She omitted the word '**correctly**' from the question and added the article '**the**' before the adjective. In the first answer, the omission of the word 'correctly' violates the meaning. However, in the second one the addition of 'the' is ungrammatical.

*Second: Questions without inversion using 'whose'

Q5:   **Whom** mother is Russian? Instead of (Whose mother is Russian?)

The learner chose the wrong question word which makes the question grammatically wrong.

*Third: Questions with copula 'be'

Q18: How **it** was George's grandfather? Instead of (How was George's grandfather?)

The error in this question is the unnecessary addition of the word **'it'**.

*Fourth: In constructing questions with inversion, the learner committed four errors which are as follows:

- Q3:   Where she **has** been since she was a child? Instead of (Where **has** she been since she was a child?)
- Q4: Why it **is** forbidden to kill whales? Instead of (Why **is** it forbidden to kill whales?)
- Q7:   What he **is** studying? Instead of (What **is** he studying?)
- Q22: Where is **the** violence found? Instead of (Where is violence found?)

These errors are three errors of misordering in which there is no subject operator inversion and one error of addition.

*Fifth: Nearly half of the errors were in Questions with 'do' support, in which the pupil made 10 errors. These errors occurred in the following questions:

Q1-   **Since when √** Kareen **went** to USA? Instead of (**How long ago did** Kareen **go** to USA?)

Q9-   **What did** my parents feel after work? Instead of (**How do** my parents feel after work?)

Q11-   **What** does Lila like to wear, and what she doesn't? Instead of (**Which jacket** does Lila like to wear?)

Q12-   Who **met** my father yesterday? Instead of (Whom/who did my father meet yesterday?)

Q14-   **How many time** do they brush their teeth? Instead of (**How often** do children brush their teeth?)

The most frequent errors found in the learner's responses above were the wrong choice of the interrogative words 'how long ago', 'how often', 'how' and 'which'. The next common type is the misformation of the predicator; (in 'went' instead of 'go', 'met' instead of 'meet' and the operator did in the place of 'do'). In the two questions in which this learner let

the main verb as it was, she omitted to insert the auxiliary 'did'. Moreover, she put the verb before the subject in Q12.

*In constructing questions with (What + a form of 'do'), the learner committed three errors which are as follows:

Q10- What **does she** do? Instead of (What **do the girls** do?)

Q16-   What he **was** doing?   Instead of (What **was** he doing?)

        There is one error of misordering in which there is no subject operator inversion. The learner replaced the word '**the girls'** by '**she'** for which she put the auxiliary 'to do' in accordance with the subject (**does** instead of '**do'**).

        Depending on the findings above, this pupil doesn't have a problem with the structure of Questions without inversion (Asking about the subject in the sentence) and Questions with copula 'be'. But, she omitted a necessary word that makes the meaning incomplete and added 'the' before 'important' and 'it' after the question word 'how'. On the contrary, she had a problem with the right question word used to ask about possession. Concerning Questions with inversion, she didn't invert the subject with the auxiliary 'to be' and in one question containing the auxiliary 'to have'. Besides, she added 'the' before 'violence'. In Questions with 'do' support, her great problem is in the interrogative words 'how long ago', 'how often', 'how' and 'which+ a noun', and in the structure, sometimes she inserted 'do' and put the verb in the infinitive, other times, she didn't do that. On the contrary, she put the verb before the subject or let it as it is. We try to study these types one by one in an attempt to find the real reason behind these errors. However, she well knew how to supply the correct form of 'to do' as a main verb and how to form the correct structure, except one question in which there is no subject operator inversion and replacing 'the girls' with 'she'.

3.3. Results Analysis

        The findings of the study have revealed that out of the 460 questions only 36 were fully correct, while 340 were incorrect, with at least one to multiple errors in each, and 84 were avoided to be answered. The gaps remaining without answers were considered as wrong answers due to the lack of knowledge or carelessness. The percentage of the correct answers is **(7.82 %).** Taking Crompton's (2011) accuracy rate (after Dulay and Burt, 1974 and Brown, 1973) of 90% or higher as a sign of acquisition, **7.82 %** is a surprisingly very weak rate

compared with similar studies done with Arab EFL learners such as **78.78 %** in the research work conducted by **Al-Mekhlafi, (2013)** in Sohar University in the Sultanate of Oman and **30%** in the study done by **Addaibani, (2017)** among EFL majors in Najran University –KSA. The median number of ungrammatical questions per pupil was 17 and of the avoided ones was 04. Furthermore, the total number of the marks below the passmark represented nineteen (19) out of (20), representing a percentage of **95%.** This low level was confirmed also when calculating **the mean of the test results that was (4.8).** Besides, the researcher set intervals as criteria for evaluating the learners' competencies in *wh*-questions construction to interpret the frequency of the correct and incorrect responses as well as the absent ones in each question. Depending on what has been found, the proficiency of these learners in formulating wh-questions did not reach the passmark rate which is at least 10 correct questions for each. On the contrary, it is very weak.

Hence and on the light of the findings presented above, English grammar competence was very weak among those learners at the target school. We can certainly assume that almost all of them find it difficult to form grammatically correct questions in English.

The twenty-three questions instrument has yielded 903 errors made by all the participants; 21 were made by the exceptional pupil who got 11.25 points out of 20 and the rest of the errors (882) were committed by the rest of the learners who did not get the passmark in approximately similar marks that reflect similar difficulties. Hence, the test papers of this pupil and the rest of the class were treated in the same way of analysis but separately because of their different levels and the errors she committed were not included in the analysis of the whole class.

3.3.1. The Principal Sample Results Analysis

As said previously, out of 460 questions 36 were correct answers. 28 right questions within these answers were constructed by the rest of the class in a percentage of 77.77%. They made882 errors out of 903 in a percentage of 97.67 %, which shows that those learners had serious difficulties in constructing *wh*-questions. The analysis of their test papers determined the most difficult forms of wh-questions encountered by them and the precise errors in each type.

The percentage of 7.82 % correct questions were nearly made of three main sentence types "who +verb + stem?" And "what + be+ stem?" "How + be+ stem?" "wh-word

+ be+ S+ Verb +stem?" in proportion of 66.64%. However, the highest proportion seems to be in the case of forming wh-questions without inversion; more precisely asking about the subject in the sentence in which there is no need for the subject- auxiliary inversion in percentage of 38.88%. However, 27.76 % correct questions were interrogative sentences which contain a copula *'be'*, or *'be'* as an auxiliary in which the learners need just to put *'be'* before the subject. In the other hand, it is obvious that the most difficult forms of questions among those learners were *wh*-questions without inversion using 'whose' and Questions with (*What + a form of do?)* used to ask questions about **activities** since no one can supply a correct answer. This is also confirmed when having a deeper insight into the frequency of 'no response' in table 3.3 in which 10 to 12 pupils out of 19 in percentages 52.63% to 63.15% avoided to answer questions 15, 19 and 23 in which they had to insert the auxiliary *'to do'* and the correct form of the verb *'to do'* instead of the main verb. The next most difficult forms of questions found in this study were *wh*-questions that need do-support and *wh*-questions with inversion mainly questions that contain an auxiliary verb 'to have' and modal verbs.

The major findings have revealed the most common errors made by those pupils in each type. A main step in error analysis method is trying to find out the reasons behind making such errors which reflect their learning problems. This helps a lot in making right decisions for further instruction and remedy. According to Barr et al (1947, as cited in Pawan, 2015, P. 28), "*the correction and elimination of the weaknesses through a constructive attack on their causes constitute an essential complementary process closely related to diagnosis*". In this way, diagnosis is an attempt to understand and eliminate a present problem in terms of determining its causes and thereby planning appropriate remedial measures. Mourssi (2013, P. 250) claims that the learners' errors may be seen as a result of different processes which traditionally have considered to involve a mother tongue and a target language. Richards (1974), in his study which may be the first and most important one among the studies that have been conducted to suggest different reasons why errors occur, classifies errors according to their sources into two categories: interlingual errors caused by mother tongue interference and intralingual and developmental errors caused during the process of second language learning and which reflect the general characteristics of rule learning such as overgeneralization of rules, incomplete application of rules, ignorance of rule restrictions and false hypothesis or errors caused because the difficulty of the language itself (as cited in Heydari and Bagheri, 2012).We tried to determine the reasons behind making such errors in spite of the fact that it was difficult to prove that the studied error has a specific cause. This is

what has been confirmed by Mukattash (1981) who states that there is no way of proving that any given error type has a specific cause. That means if it is due to L1 interference or the target language itself. In the same vein, Schachter and Celce-Murcia (1977) argue that it is difficult to be certain precisely what type of error a second language learner is making or why the learner makes it. They argue that the same error can be attributed to developmental errors as those found in the acquisition of the second language (SLA**)**as well as to factors reflecting the influence of the learners' L1 (Healy and Bourne, 2013. p.403).

As a main element in question construction, we displayed first what type of wh-words those learners chose and mastered. In this study, M*isselection errors* proposed by James (2010) (as cited in Masruddin and Karmila, 2018) is restricted to the wrong choice of wh- words. Errors can be categorized as errors of **misselection** for the wrong selection of items. There were 146 cases in which the learners failed to supply the right interrogative words in a percentage of 16.55%, approximately in similar frequency of occurrence. They had problems with almost all these question words, namely' which', 'how ', 'how long ago', 'how often', 'how many', 'whose' and 'whom'. Even 'what' that seems to be easy for learners in general had misused in the same frequency as those mentioned above. Their failure is attributed to learners' poor knowledge of interrogative words or their inability to understand the sentences because of the difficulty of words or their weak level. Thus, more practice on these particular *wh*-words should be taken in the remedy programme. However, they didn't have a problem with the *wh- word movement* to the front of the question as it is placed in the initial position in both English and Arabic.

The most common errors committed by the learners when asking questions about the subject and questions with copula 'be' were errors of addition, namely addition of the article 'the' and 'it', the words targeted for the questions and the auxiliaries 'be' and 'do'. However, their addition made the questions ungrammatical.

The analysis of the wrong questions with inversion shows that the most frequent errors among those learners was subject-auxiliary inversion. In addition to the omission of the operator and the subject, the unnecessary insertion of words, the omission of words from the questions, the unnecessary insertion of the auxiliaries 'to be' and 'to do' and misformation of operator and predicator were prevalent in their responses.

The analysis of their answers in questions with 'do' support revealed that the majority of learners had problems in the use of English tenses, verbs and auxiliaries. This occurred in

the misformation of the predicator and the operator; namely the necessity of putting the main verbs in the infinitive form, and in the omission of the operator 'do'. Even if they used it, they found difficulties to put it in the correct tense form and in accordance with the subject. This led the majority of them to put the verb as it was before the subject like 'Who met my father yesterday?' 'What means child labour?'. In addition, they did not distinguish between regular and irregular verbs. All these are because Arabic has only three tenses while English has 14 tenses and this is considered as *"one of the most difficult structural points facing the Arab pupils learning English"* (Hourani, 2008, p. 29). If we refer those errors to L1 interference, we can say that Arab learners' difficulty with the interrogative construction is compound by the fact that Arabic language does not have auxiliaries, and this can be touched in their omission of the operator. Besides, it has just three basic tenses past, present and future, unlike English which has many. This is evident in their failure to include the appropriate form of the predicator. Giving examples the questions given above, this improper word order can be due to L1 interference since one of the forms of questions in Arabic is interrogation tool (*wh* – word +V+ S…?). However, Ellis (1997) states that mainly misformation errors occur when a learner lacks knowledge of the appropriate language forms. These errors are evidence of gaps in knowledge of the target language rather than merely being L1 interference.

The most difficult aspects among those learners when constructing wh-questions that need 'do' insertion but with 'what + a form of 'do'' were the omission of the operator 'do', keeping the main verb instead of inserting 'to do' in the right form and the total omission of the main verb. The use of the auxiliary 'to do' presents a difficulty for those learners. Even if they used it, they found difficulties to put it in the correct tense form and they didn't invert it with the subject. We referred these to the aforementioned causes. This represents the next most common error type in similar percentages as errors of do-subject inversion. The next frequent errors were those of subject omission, be redundancy and verb inverted errors in similar frequency of occurrence. The unnecessary addition of words mainly the underlined words intended for the questions presents the next common errors type. The following ones are ill-formed questions and the wrong choice of the *wh*-word in spite of the fact that the only *wh*-word used in this type of questions is the simplest one 'what', in addition to the unnecessary insertion of 'to do'. However, there are other errors but in small proportions; namely misformation of predicator, unnecessary insertion of words and 'what' misformation.

In this stage we study some examples taken from the test papers of the learners. As mentioned above, the analysis of the most frequent errors committed by those learners depends on Richards' division and subdivision (1974). According to him intralingual errors are subdivided into three main types: overgeneralization (from one structure to another), ignorance of rule restrictions (within the structure itself) and incomplete application of the rule. Through studying some examples taken from the test papers illustrating the most frequent errors made by the learners, the major sources of such errors could be determined.

∗The most common error type among third year learners at the target school when forming wh-questions was the use of the wrong wh question words. These are some examples:

Whom mother is Russian?   (**whose** mother is Russian?

What did your parents feel after work? (**How** do your parents feel after work?)

This type of errors was intralingual errors type; they had no relation with the mother tongue but with the target language which is English. It may be due to the incomprehensibility of the underlined words or the ignorance of the wh question words.

∗ What √ child labour _means_?   (What **does** child labour _mean_?)

Auxiliary to do was omitted when it is necessary in asking _wh_-questions and this is due to lack of knowledge about the form of questions in English.

∗What **means** child labour?   (What does child labour mean?)

*Where **is found** violence?   Where is violence found?

In this interrogative sentence, the verb preceded the subject while the correct order in English is (wh-word + aux + S + V). This error of word order can be due to L1 interference since one of the forms of questions in Arabic is interrogation tool (_wh_ –word +V+ S).

∗What he is studying?   (What is he studying?)

The error presented in the position of the auxiliary (is). In this way, the error is the absence of the obligatory inversion of the auxiliary and the subject. This type of error had no relation with the mother tongue. It can be considered as incomplete application of the rule.

∗How who does tired after work?   How do your parents feel after work?

This sentence has no sense and it is due to the incomprehensibility of the words and sentence structure.

∗Other types of errors related to tenses and verbal form were persistent in most of the test papers, such as: wrong verb form verb omission, unnecessary insertion of the auxiliaries (to be) and (to do). Wrong replacement of auxiliaries (to be) and (to do). Some examples of each type were mentioned as follows:

a- What does child labour means? (What does child labour **mean**?)
b- What did the Arabs √?
c- What <u>is</u> the Arabs do?
d- Where <u>does</u> violence found?

The verb should be written in the infinitive form in sentence (a). In sentence (b), the verb is omitted whereas in sentence (c), the auxiliary (to do) is replaced by (to be). However, the contrary occurs in sentence (d).

The use of verbs in question forms in right tenses and forms seemed to be difficult to learners. The verb auxiliaries have also been omitted or misused. This shows that learners have more difficulties in using auxiliaries in asking wh-questions as it is stated that the auxiliary verbs are often problematic for L2 learners since there are certain rules on how to use them (Taher, 2011, p. 26). In all the sentences above except sentence b, these error types are classified as an incomplete application of the rule. This type of error is probably due to lack of knowledge about form of questions, tenses, verb forms and auxiliaries. However, the source of error in questions b seems to be direct translation from Arabic.

Depending on what has been said above, it can be revealed that the errors made by those learners were both from interlingual and intralingual interference. However, their biggest number of errors is due to intralingual factors. Those caused by L1 interference were in a small proportion compared with those resulted from English. That means that most of them were independent of the learners' mother tongue and were caused by the influence of English language. More precisely, most of them were caused by overgeneralization or incomplete application of rules or the total ignorance of rules. They are items produced both by the learner which reflect not the structure of the mother tongue, but problems based on partial exposure to the target language (Richards (1970), as cited in AbiSamra, 2003).

This research described the case study which concerned the types of the grammatical errors committed by the third secondary pupils when forming wh -questions, through analyzing the test results, focusing on the most frequent errors and on the most common sources behind making them. What has been noticed is that the most common errors types made by the third year pupils **were the misuse wh-words, auxiliary omission**, the **absence of auxiliary/verb inversion, wrong verb form,** verb omission **and the** unnecessary insertion of the auxiliary to be. In this type of task, some other errors were found in different degrees such as the unnecessary insertion of words, the use of the wrong tenses, unnecessary insertion of the auxiliary to do, and the use of the auxiliary to do instead of to be. The causes behind making such errors were both due to interlingual and intralingual interference. Whereas, the errors caused by the learners' mother tongue were in a small proportion. However, intralingual errors are mainly due to overgeneralization, incomplete application of the rules and most of times total ignorance of rules

A similar analysis was done to get an overall overview of the main areas of weaknesses and problems of the exceptional pupil.

3.3.2. The exceptional pupil Results Analysis

In accordance with the results, there were 36 correct answers from which the exceptional pupil had 08 right questions without any error at all in a percentage of 22.22%. She made 21 errors out of 903 in a percentage of 2.32 %, which shows that this learner did not have serious problems in constructing *wh*-questions at least not so as her classmates. For this reason, her responses have been studied separately to determine the precise errors she committed and the most difficult forms of wh-questions encountered by her for the purpose of setting the remedial instruction most suitable for her.

It is worth mentioning that the grammar errors found in this study were examined under the categories of the surface structure taxonomy of errors suggested by Dulay et al (1982) and which are omissions*, additions, misformation and misordering.* M*isselection errors* proposed by James (2010) (as cited in Masruddin and Karmila, 2018) is restricted to the wrong choice of wh- words in this research. Depending on these taxonomies, errors can be categorized as errors of *omission* for the absence of necessary items that must appear in a well-formed utterance, errors of *addition* for adding items that must not appear in a well-constructed utterance, *misformation* for incorrect forms of morpheme or structure,

misordering for the wrong order of the elements of an utterance and *misselection* for the wrong selection of items.

The most frequent errors found in her responses were the misselection of the interrogative words, namely 'how long ago', 'how often', 'how', 'whose' and 'which + a noun'. Therefore, she needed more practice on these particular *wh*-words. However, she didn't have a problem with the *wh- word movement* to the front of the question as it is placed in the initial position in both English and Arabic.

The next most common error type is improper order, namely the absence of auxiliary/verb inversion in which the auxiliary verb is placed after the subject not following the right form: 'Wh-word + auxiliary verb + subject+ verb stem…?' (adapted from Cowan, 2008). What can be seen is that in the same category, this learner answered some questions correctly and failed in others though they share the same features, namely Questions with inversion (using the auxiliary 'to have' and 'to be') and Questions with (what + a form of 'do'?). We try to study these questions.

- She didn't put 'has' before the subject (Where she **has** been since she was a child?) while in this example she did (How many books **has** Helen read?)
- She didn't put 'auxiliary ''be'' before the subject (Why it **is** forbidden to kill whales?), (What he **is** studying?) And (What he **was** doing?), while in this example she did (Where is <u>the</u> violence found?).

Errors of this type according to my point of view, might have happened because of misunderstanding of words in the sentence such as 'forbidden' or lack of interest and lack of motivation.

The third frequent error type was the unnecessary addition of (03) words namely 'the' and 'it'. In my opinion, in forming these two questions in English, the influence of Arabic, being the learners' mother tongue, is clearly noticed in the use of the definite article 'the'. If we translate them into Arabic, we find that the words 'important' and violence' are defined. (What is **the** important? And Where is **the** violence found?)

The next common error types were auxiliary omission and wrong form of the main verb in the same two sentences in which she should insert 'do' and put the verb in the infinitive form. These are the erroneous questions:

- **Since when √** Kareen **went** to USA?

- Who **met** my father yesterday?

In these questions, we have two errors of misformation of the predicator, two errors of omission of the operator and one error of misordering. The same problem discussed above is that this learner answered some questions correctly and failed in others in the same category of questions forms, such as these answers (When did Hong Kong revert to China?) And (How often do children brush their teeth?). In this case, her prevalent problem may concern irregular verbs and her errors were the result of forms ignorance. Thus, the irregular verbs should be learnt by heart by EFL learners.

- However, in the question (Who **met** my father yesterday?), the learner let the main verb as it was and she omitted to insert the auxiliary 'did'. Moreover, she put the verb before the subject. This question could be attributed to the interlanguage transfer of Arabic and English since in *wh-* questions in Arabic can be formed by adding the wh- word (the interrogative pronoun) at the beginning followed by a verb then the subject and the rest of the sentence without changing or adding anything. In these sentences, there are no primary auxiliaries or modal verbs like *'be', 'have'* and *'do'* (Swan and Smith 1987, as cited in Umale, p.98).

The other errors were the omission of the word 'correctly' or replacing the word 'the girls' by 'she', the use of the wrong tense and form of the auxiliary, and finally the wrong position of the main verb in which the verb preceded the subject (discussed above). We attempt to study them as follows.

- The omission of the word 'correctly' or replacing the word 'the girls' by 'she' might be due to carelessness and lack of interest.

- **(What did** my parents feel after work?) to ask a question about the word 'tired' in (My parents feel **tired** after work.), she treated the word 'tired' as a regular verb with '*ed*' form and ignored that it is an adjective. So, this error resulted from confusion and lack of knowledge.

Depending on the findings above, this pupil didn't have a problem with the structure of Questions without inversion (Asking about the subject in the sentence) and Questions with copula 'be' just some errors of words addition and omission. On the contrary, she had a

problem with the right question word used to ask about possession. Concerning Questions with inversion, she found difficulties with questions containing the auxiliary 'to be'. In Questions with 'do' support, her great problem was in the irregular verbs. However, she well knew how to supply the correct form of 'to do' as a main verb in Questions with 'What + a form of 'do' and how to form the correct structure. Hence, the remedial instruction proposed for her should be based on auxiliaries 'to be' and 'to have' informing complex tenses and the irregular verbs.

3.4. Conclusion

This chapter described the case study which concerned the types of the grammatical errors committed by third year level, secondary school pupils, Foreign Language stream, at Sadok El-hadj School, in Naama, Algeria, when forming *wh-* questions. The frequent errors found in the diagnostic grammar test were analyzed according to the different types of *wh*-questions depending on their different structures and under five broad categories, namely omission, addition, misformation, misordering and misselection errors. The study aimed at finding out the most difficult forms of *wh-* questions encountered by them and the most common errors in each type with an attempt to determine their sources. First, it provided an overview description of the learners' level in such grammar point by means of the test marks and the participants' grades distribution out of 20. Then, an analysis of the frequency of all types of questions (question by question) was done to provide information about the most difficult forms of questions and the grammatical errors made in each type. The analysis was based on their different levels since nineteen participants got less than the passmark in approximately similar marks and one pupil got 11.25 points out of 20. The analysis of the most difficult forms encountered by those learners depended on the following types of *wh*-questions forms: Questions without inversion to ask about the subject in the sentence using 'who' or 'what' and the question to ask about possession using 'whose', Questions with inversion containing copula 'be', Questions with inversion containing either the auxiliary 'be' or 'have' or a model verb, Questions with 'do' support and Questions with '*What + a form of do'* to ask about activities**.**

Chapter three dealt with the analysis and interpretation of the data obtained from the diagnostic grammar test. However, the following chapter will attempt to set some measures and recommendations on how to use these data to improve instruction and support students' grammar learning.

CHAPTER FOUR:

Making the Best Decisions

of Grammar Instruction:

Perceptions   and

Suggestions

Chapter Four:

Making the Best Decisions of Grammar Instruction:

Perceptions and Suggestions

4.1. Introduction

Improving the quality of teaching and learning using data-based decisions is becoming a contemporary concern in education over the last few years. One of functional type of data used to make decisions that improve instruction is the use of assessment data. Thus, assessment and instruction are becoming more closely linked and interrelated. Using effectively data obtained from students' performance on tests mainly diagnostic tests helps to target problems and set appropriate solutions and strategies of treatment and for further instruction through making better instructional decisions. For this reason, the goal of this chapter is to provide current information about how data obtained from diagnostic assessment can be a support to instructional making decisions to improve grammar teaching and learning. It attempts to provide a conceptual base for understanding the notion of effective teaching as effective decision making based on data obtained from diagnostic grammar assessment. It offers teachers a framework of things to be considered and focused on when making decisions about grammar teaching. Teachers, to be able to succeed in doing so, are strongly required to be qualified, competent and effective. Hence, chapter four first addresses issues concerning the necessity of being able to make effective instructional decisions as a key component of effective teaching through highlighting some concepts related to teacher effectiveness. These concepts involve its definition, its relation with student learning and its dimensions focusing on instructional effectiveness as a crucial element of effective teaching.

This chapter highlights the significance of diagnostic assessment to effective instruction. The success of implementing something depends on the effectiveness of its planning and design. Hence, this chapter presents the necessary stages of educational decision process through which they make and implement decisions on the basis of deep analysis of the problem. It offers teachers a framework of things to be considered before and when making decisions about grammar teaching. It also offers a framework of how teachers can respond to data and adapt their instructional strategies, methods, and other classroom techniques to help their learners achieve the desired learning outcomes. Other areas of decisions are also mentioned including the necessity of providing special instruction for special learners with different grammar learning strategies; either differentiated instruction or group instruction.

At the end and to overcome the learners' difficulties in learning English wh-questions, chapter four proposes some perceptions and strategies to do so. It attempts to provide suggestions about the ways in which forming wh-questions in English should be taught and

assessed at this level. Depending on the obtained data concerning the most committed grammatical errors, it tries to give teachers an idea of how to deal with such grammatical errors, how to explore them to foster the learners' grammatical ability, which grammar points to focus on before and when teaching wh-questions to EFL learners; and how to sequence grammar instruction in general.

4.2. Teacher effectiveness and instructional effectiveness

Success in achieving the desired learning goals depends on three highly basic foundations which are the teacher, the learner and the instruction with assessment. However, effective student learning depends on effective teaching and it is possible only when education system operates through effective teachers (Habib, 2018). Indeed, no other factor has more impact on pupils learning than a competent and an effective teacher. No doubt, "the influence of individual, family, community, and other beyond-school factors dramatically influence student success. Nonetheless, of all the factors within the influence of schools, teacher quality is among the most, if not the most powerful variable affecting student achievement" (Stronge, Gareis, & Little, 2006 as cited in Grant et al, 2013, p. 3). Hence and due to his paramount role, teacher effectiveness becomes a must for the success of the teaching learning process and hence the success of any educational system. In fact, the profession of teaching is not easy, rather it is stressful mainly at the beginning. However, it can be very rewarding and enjoyable when the pupils progress and their teachers recognize that they helped them in doing so (Harmer, 2007). They succeed in achieving that through understanding the notion of effective teaching as effective decision making to improve their teaching as well their students' learning. Teachers who can make effective decisions concerning different educational situations are the teachers who can make a great and positive impact on students' achievement. For this reason, teacher effectiveness has been recognized as a key component of successful teaching learning process.

4.2.1. Definition of Teacher Effectiveness

Teacher effectiveness has been considered as a multi-dimensional concept because it refers to a variety of aspects of teaching. Accordingly, it is viewed as a broad term that can be defined in many ways. However, Little et al (2009) state that there are many conceptions about teacher effectiveness, and defining it is complex and sometimes controversial. Similarly, Stronge, Ward and Grant (2011) confirm that when claiming that "Teacher's

effectiveness is difficult to define since there has not been a consensus agreement on what measures quality teacher" (as cited in Habib, 2009, p. 2).

Teacher effectiveness can be defined in many ways and from different sides of views. In Medley's terms (1982), the possession of knowledge and skills falls under the heading of 'teacher competence' and the use of knowledge and skills in the classroom is referred to as 'teacher performance', Teacher competence and teacher performance with the accomplishment of teacher goals, is the 'teacher effectiveness'(Rao , 2004).In the narrowest sense, it refers to a teacher' ability to improve student learning which is reflected in student achievements on standardized achievement tests, whereas, this is a key aspect of teaching effectiveness, but not all(Little et al, 2009). In the broadest sense, teacher effectiveness can be simply described as the success in helping learners to learn. Effectiveness of a teachers can be described as their success in supporting the students' learning and "the related characteristics of effectiveness can be described as certain qualities which are related to teachers' effectiveness and which enable the teachers to achieve success in education (Walker, 2008 as cited in Dutta, 2017, p. 145). Generally, it means a set of characteristics, competencies and behavior of teachers at all educational levels that aid learners to reach the desired goals (Habib, 2011).

However, there are several definitions that detail the quality characteristics of effective teaching. According to Habib (2018), this term is made up of two words 'Teacher' and 'Effectiveness'. 'Teacher' is a person who teaches; 'teaches' means imparts knowledge or skills to learners. However, 'effectiveness' is the quality of being successful in achieving an intended result. She refers teacher effectiveness to "the focus on student outcomes and the teacher behaviours and classroom processes that promote better student outcomes. Effective teachers are clear about instructional goals and are knowledgeable about curriculum content and the strategies for teaching it" (Habib, 2018, p. 5). According to Job (2017), the literature leads educators in three main directions when defining teacher effectiveness.

The first is an emphasis on student achievement, mainly standardized test scores (Carrero, 2016; Chetty, Friedman, & Rockoff, 2012; Martineau, 2010). Other studies on teacher effectiveness identify the skills and actions of highly effective teachers (Gallagher, 2012; Stronge et al., 2011). In addition to these findings, some other studies go beyond test scores and skills to identify the mindset and attitudes needed to increase teaching effectiveness (Gurol & Kerimgil, 2010; Hobbs, 2012; Lewis, Perry, Friedkin, & Roth, 2012).

(Job, 2017, p. 14)

In addition, King and Watson (2010) go beyond the aforementioned features when providing some principles that help to define teacher effectiveness; they state that there are five key principles that guide excellent teaching for all students:

(a) accountability for student achievement and empowerment;

(b) a belief in the power and the intersection of accomplished teaching and unlimited potential of each student;

(c) the use of a theory of learning to guide accomplished teaching practice and student learning;

(d) content expertise and the ability to connect to students' lived experiences in and out of school and expertise in pedagogy that builds confidence, affirms effort, and uses data to guide a step by-step, personalized teaching and learning process

(King and Watson, 2010, p. 177 as cited in Job, 2017, p. 17).

Hence, teachers to be effective in their teaching should know what good teachers do and how to get better, and how to have a positive, powerful and long-lasting influence on their learners on the academic as well as personal levels.

4.2.2. Teacher Effectiveness and Student Learning

Improving the quality of teaching and learning by improving teacher quality has become a contemporary concern of studies and a major issue for educational reforms. Many researches have focused on the effectiveness of teachers as a key factor in improving student learning (Cochran-Smith (2006), Brewer (2006), Ingersoll (2004) Darling- Hammond (2000), Campbell, Kyriakides, Muijsc, &Robinsona, (2004), Lasley, Siedentop, & Yinger (2006),

Rockoff (2004) as cited in Dutta et al, 2017). Many factors can influence student learning, but research has confirmed that teacher effectiveness has the greatest impact on student achievement. Most of these studies have shown that teacher effectiveness is more important and influential than any other factor related to the student such as class size or class composition (Shernoff, Marinez-Lora, Frazier, Jakobsons, & Atkins, 2011; Schmidt, Houang, & McKnight, 2005, as cited in Job, 2017).

Much research has been conducted about teacher effects on students' academic success and learning including professional as well as personal characteristics. Teachers play varied and vital roles in their classroom. Researches support that the actions taken by the effective teachers in the classroom play a fundamental role in effective and efficient learning of the students (Andrew & Schwab, 1995; Markley, 2004; Wang & Fwu, 2007 as cited in Dutta et al, 2017, p. 144). In previous literature, Wayne and Youngs (2003) found that college teacher evaluations, licensing test scores, grades, and certification status were positively associated with student achievement gains. They concluded that students learn more from teachers with higher scores on each of the above characteristics (Garrett, 2009).

Furthermore, effective teaching is concerned with the student and his general development in all aspects that may directly or indirectly affect his academic achievement .In other words, in the perception of high-quality education, teaching and learning theories have long emphasized the important role that teachers play in supporting students' development beyond their basic academic skills to areas such as emotional supports and organizational techniques that are equally considered important to learners as teachers' instructional methods (Pianta and Hamre, 2009, as cited in Blazar and Kraft, 2017). They state that teachers can help their learners to be more self-reliant, motivated to learn, willing to take risks and able to be self-regulated by providing "emotional support and a predictable, consistent, and safe environment" (p. 113, as cited in Blazar and Kraft, 2017).Some researchers have identified teacher effectiveness that can improve students' educational level in integrating some unique aspects of teacher education which are teachers' social and emotional interactions with students, their ability to organize and manage the classroom environment, and their effective instructional supports in the delivery of content (Hafen et al., 2015; Hamre et al., 2013 as cited in Blazar and Kraft, 2017).In addition, a study of first-grade teachers found that those who conveyed more positive attitudes and beliefs produced significantly higher achievement gains in their students (Cantrell, Stenner, & Katzenmeyer, 1977, as cited in Garrett, 2009).

As teachers' role is of a paramount importance in EFL classrooms in spite of the introduction of the CBA in which the learners form the centre of the teaching-learning process, they need to develop their classroom skills continuously to meet the requirements of the teaching and learning situation. Sanders and Horn (1998) found that the single most important factor in student academic achievement is the classroom teacher. Therefore, it seems that identifying the characteristics that make teachers most effective should be a high priority for school administrators, legislators, teachers, and students alike (as cited in Garrett, 2009, p. 1).

Thus, teachers to improve the quality of their teaching should improve their quality and effectiveness as teachers. This can be through a variety of several ways, among which the dimensions identified by Stronge, Ward and Grant (2011) as cited in Habib, (2009) can be inclusive of all aspects that a teacher must have to be an effective teacher.

4.2.3. Instructional Effectiveness as a Key Dimension of Teacher Effectiveness

The effectiveness of teaching is dependent upon the interaction of many components which influence directly or indirectly the students' achievement. The teacher's ability to deliver the required instruction effectively is considered as the most significant element if not the central that constitute teacher effectiveness. Teaching effectiveness depends on the interaction between many elements of which the teacher's knowledge of the subject and his pedagogical teaching ability are considered among the most important. However, this complex interaction between these two important variables is influenced by several factors such as classroom management, learners' motivation, assessments and so on. Stronge, Ward and Grant (2011) identified four dimensions that can be inclusive of all aspects that a teacher must have to be an effective teacher:

- Instructional effectiveness
- Uses of assessment of student learning
- Positive learning environment
- Personality quality of the teacher (as cited in Habib, 2009)

This conceptual framework of teacher effectiveness involves the key concepts that are used to understand the requirements to be effective teachers and the key components of each concept.
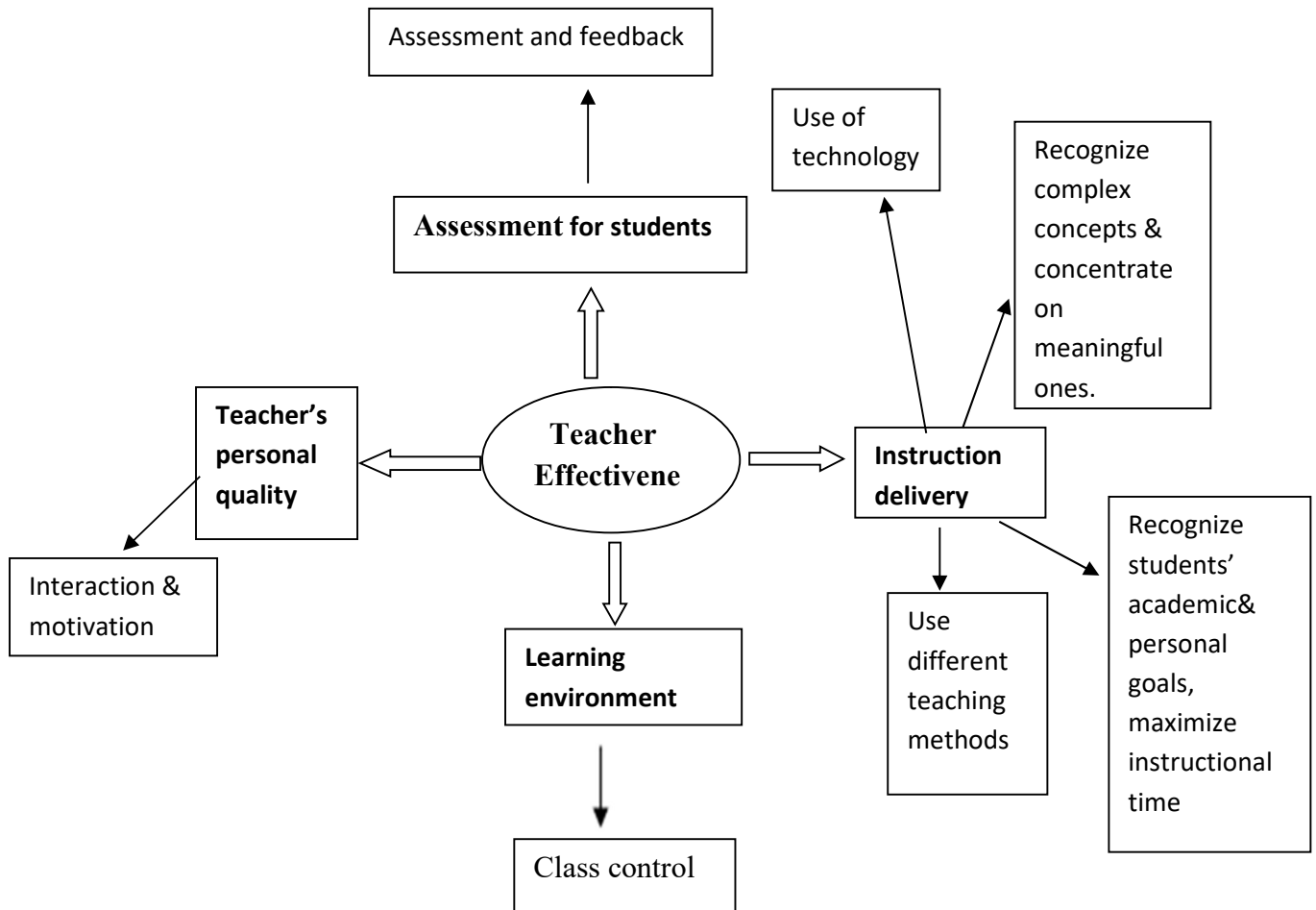
Figure 4.1. Conceptualizing teacher effectiveness (Source: Habib, 2009, p. 3)

From the figure above, an effective teacher can be measured by his instructional delivery, the way he assesses his learners, his ability to provide a supporting learning environment and his personal qualities necessary for good interaction with students.

Instructional delivery can be better described as instructional effectiveness that involves both instructional planning effectiveness and instructional delivery effectiveness. The planning and organization of the course precede its delivery. Bain (2004) states that course organization and planning exhibit several key characteristics that drive teacher effectiveness such as the ability of the teacher to clearly communicate course expectations, create course assignments that aid student learning, prepare lessons that demonstrate the course content knowledge and emphasize relevant course concepts (as cited in Paolini, 2015). Good preparation of lessons is an effective factor of effective teaching. For teaching any English lesson, it is necessary to prepare it in advance. Moreover, Content knowledge is considered as a key factor for any effective teacher. Teacher content knowledge known also as subject matter knowledge refers to the information that teachers have and are expected to

teach in a subject matter (Ellis and McCartney, 2011). Teachers need to know as much as possible about the subject they are teaching (Harmer, 2007). Teachers with highly content knowledge in a specific subject tend to be more effective teachers because "it tends to be the teacher the pupils will ask when they want to know" (Burgess and Head, 2005, p.2). Some researchers suggest that there is a necessity to develop strong pedagogical content knowledge which means that they should master the most effective ways to teach learners that particular subject (from the Glossary of Education Reform, 2013). According to Paolini (2015), teachers should give priority to the content they teach to ensure that it meets the learning objectives of the course. They should recognize complex concepts and concentrate on the meaningful ones. They assign tasks to students that enhance learners' skills and knowledge (Macsuga-Gage et al., 2012, as cited in Paolini, 2015). Effective teachers should be concerned with their students' academic goals as well as their personal goals, use different types of technologies and different teaching methods according to the different situations.

The second factor is his uses of assessment and feedback for student learning. Effective teachers should know how, when and what type of assessment and feedback can be better serve their lessons. Dash and Behera (2018) emphasized the importance of assessment and feedback for effective learning through effective teachers when stating that "the primacy of assessment processes in learners' academic success expects teachers to be familiar with these tools to know where the learners are in the learning continuum, decide properly where they need to go, and how best to get there" (2018, p. 169).

As mentioned previously, the teacher's ability to deliver the required instruction effectively is considered the most significant element if not the central that constitutes teacher effectiveness. The teacher's knowledge of the subject and his pedagogical teaching ability build a positive attitude and good perceptions from learners towards them. According to Kyriacou (1998), respect and rapport can be developed from the pupils' perceptions about their teacher; his competence as a teacher, care about their progress through planning and conducting good lessons. According to Harmer (2007), a good rapport is built up when teachers are qualified in terms of professionalism. Besides, fruitful learning depends to a great extent on the teacher's personal quality and his success in adopting different roles appropriate to fit different contexts. That's why, in addition to the teacher's personal quality, providing a positive learning environment through building a good rapport with learners and being able to manage their classes is considered as one of the basic necessities to reach teacher effectiveness. The type of the relationship between the teacher and his pupils determines the

language classroom climate. Having a mutual respect and rapport is highly recommended in schools (Kyriacou, 1998). The classroom atmosphere can promote grammar learning if it involves good teacher- learner relationship which encourages a friendly and stress-free learning environment. A positive, enjoyable and respectful relationship is a common feature in the best lessons (Harmer, 2007). Good teachers react to indiscipline and solve problems respectfully. Treating all pupils fairly and equally establish and promote good rapport that motivate them to learn more. Moreover, *"effective teaching and learning can take place only if there is a good order and positive learning climate in the classroom"* (Hue and Li, 2008, p. 5). That's why, classroom management is necessary to establish a good classroom climate and managing instruction in effective ways and actions (Hue and Li, 2008). Most teachers find difficulties in managing their classes because of many causes among which the inability to offer good lessons is the most influential one.

Instructional delivery can be better described as instructional effectiveness that involves both instructional planning effectiveness and instructional delivery effectiveness. The planning and organization of the course precede its delivery and the successful of its delivery depends greatly on the effectiveness of its planning which is mainly based on making decisions depending on a variety of information and sources among which diagnostic assessments are the most significant and beneficial.

4.3. Diagnostic Assessment Significance to Instructional Planning and decision making

The success of implementing something depends on the effectiveness of its planning and design. However, "a plan cannot be said to exist unless a decision…Decision-making … is at the core of planning" (Weihrich ,2013, p.157). Instructional planning effectiveness is largely based on the quality of decisions made. Making decisions is based on data obtained from a variety of information and sources among which assessments data are the most useful. Making efficient decisions is mainly based on the quality of data obtained. The higher the quality of the information teachers collect, the higher the efficiency of the instructional decisions they will make. Hence, high quality assessments which provide valuable data are of paramount importance to instructional planning; more precisely diagnostic assessments. In this context, McDonald (2007) states:

Teachers have to make decisions about students, decisions that affect student lives. Good decisions are based on good information. Assessment is the systematic process of collecting and interpreting information to make decisions about students. High-quality assessment not only provide valuable information about student achievement, they also assist educators to determine the effectiveness of their instructional strategies. The higher the quality of the information you collect, the higher your confidence level will be when you are making important decisions about students (McDonald, 2007, p. 1).

Before planning and to make educational decisions relative to students' learning, teachers need information about their learners' prior knowledge and skills, their learning strengths and weaknesses. And, diagnostic assessments are the most adequate source to provide this type of information. As it is indicated that "Data-driven educational decision making refers to the process by which educators examine assessment data to identify student strengths and deficiencies and apply those findings to their practice; This process… yields data that help teachers make more accurately informed instructional decisions (Mertler, 2007; Mertler & Zachel, 2006 as cited in Mertler, 2014).

The chief aim of teaching is to maximize the learning of all learners in the classroom. To get to this aim, identifying the desired end goals and succeeding in achieving them by all learners depends on a clear picture of the current educational level of those learners. This level can be identified in their knowledge, skills, beliefs, interests as well as their preferred learning styles. The National Research Council (NRC; Bransford, Brown, and Cocking, 1999, p. 11) documents "that learning is enhanced when teachers pay attention to the knowledge and beliefs that learners bring to a learning task, use this knowledge as a starting point for new instruction, and monitor students' changing conceptions as instruction proceeds" (as cited in Callahan, 2006, p. 4). Hence, the best way to achieve this and have a complete awareness of the current academic status of all students in the classroom is through assessments, mainly diagnostic assessment in this case. This is what is confirmed by the NRC (Bransford et al, 1999, p. 127, as cited in Callahan, 2006, p. 4) who concluded that "effectively designed learning environments must be assessment centered" since assessment provides a process of administering any method to collect and analyze information about individuals' abilities and knowledge. Students learn effectively when they are aware of their strengths and weaknesses, and when they can use what they know as a basis and support to build their new learning. As it is stated, "The current understanding of the ways in which learning occurs suggest that new

knowledge must be built on existing knowledge and that existing knowledge greatly influences how students process new knowledge (Cobb, 1994; Piaget, 1978; Vygotsky, 1978 as cited in Callahan, 2006, p. 03).

But, precise determination of that is indeed a difficult process. According to Burns and Parker (2014, p. 1), Kame'enui and Simmons (1990) provide an outstanding instructional framework in which they differentiate observable and nonobservable academic behavior. Math and writing are observable because they result in a product that can be examined. There are cognitive processes involved that cannot be seen, but they can be deduced based on the written product. The same case is with grammar competence. Grammar competence is completely nonobservable. Grammar strengths and weaknesses cannot be seen directly without referring back to the learners' behaviour, exactly the linguistic behaviour. Thus, the first step in determining learner needs and difficulties in learning grammar is to make grammatical ability observable so that it can be measured and interpreted. This can be better achieved through using grammar assessments mainly diagnostic tests.

Before planning, teachers need information about their learners' prior knowledge and skills, their learning needs and interests. Much of the needed information about the present status and needs of the learners come to teachers from their diagnostic assessments. That's why, diagnostic assessment before instruction starts, is of a paramount importance since it determines what learners know and do not know about what is wanted to be taught. It doesn't discover only their strengths and weaknesses but also their misconceptions. Depending on this, they plan to start their instruction with respect to where their students are. Important considerations should be taken into account before planning instruction as a key component to instructional effectiveness. Effective teachers know who their students are. Through diagnostic assessments, they know their student's learning styles, their strengths and their deficits as learners and they are masters of their subject matter but more importantly effective teachers are always focused on their students' learning. (Habib, 2018, p. 5). So, evidences from their students' learning form the basis of their instructional decision making. The following figure illustrates the significant position of diagnostic assessment to making instructional decisions.
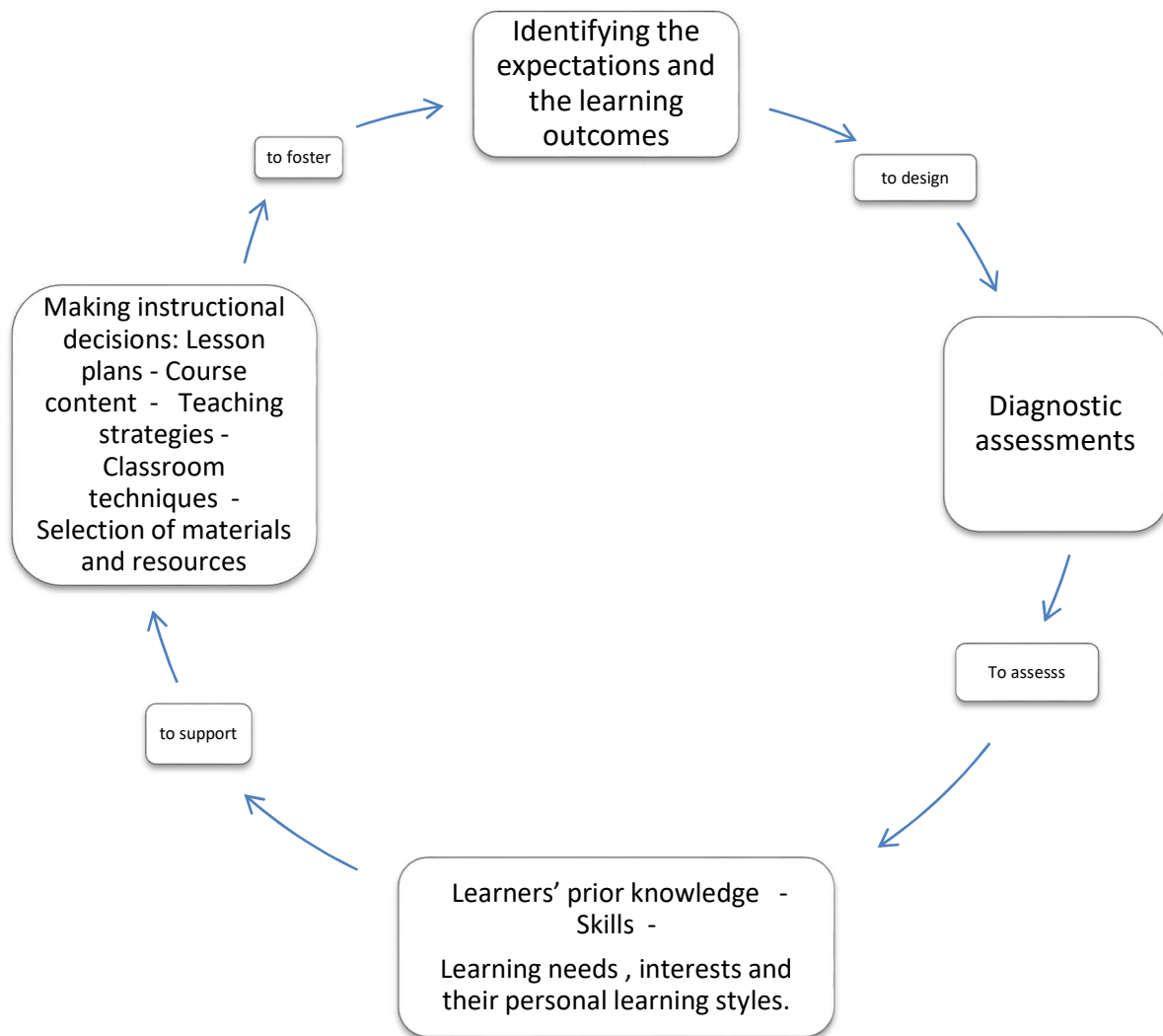
Figure 4.2. Diagnostic assessment significance to instructional decision making

As it has already mentioned, instructional planning involves matching instruction to student needs and characteristics, which can be determined through diagnostic assessments. and since it is the teacher's responsibility to make instructional decisions accordingly, these assessments must be as valid and reliable as possible to provide good data which teachers examine to identify student problems and apply those findings to better learning. These should go through well-defined steps to ensure its success. These steps can be known as the instructional decisions making process.

4.4. Instructional decisions making process

The aforementioned concepts and actions should be organized into a useful and practical frame of work, used by teachers to make instructional decisions in a systematic way,

known as the instructional decision-making process; "the process that the decision maker uses to arrive at the chosen course of action" (Sherman, 1980, p.10); a process in which the teacher selects the best and most effective course of action among other alternative options available based on what is available and his instructional thoughts and beliefs. In the same context, Duffy and Ball (1983) state that "In the typical scenario, a teacher collects a variety of data about pupils, thinks about these data in terms of a theoretical orientation or a particular belief system, and then makes decisions about how to instruct. The decisions are reflective, involving selection from among alternative hypotheses based both upon the data collected and the parameters of the teacher's theory or belief system" (1983, p. 5). In fact, teaching and instructional decisions making are interrelated since teachers continually make countless decisions to conduct and improve their teaching. From research on teaching, Clark and Yinger (1979, p. 247) describe the teacher as "constantly assessing the situation, processing information about the situation, making decisions about what to do next, guiding action on the basis of these decisions, and observing the effects of the action on the students (Duffy and Ball, 1983, p.6).

The educational decision-making process is an important and essential process in education because itis the force that drives the efforts and activity of both teachers and learners and because the quality and efficacy of the teaching learning process depend on its efficacy. Making the right decision is an important part of solving any problem, but it is not all of it. There are some who treat the educational decision process with its stages merely as decision making. However, this process is broader in its meaning and stages than making decisions. Indeed, making decisions is the most important and influential stage among them. the educational decision-making process, is the process that includes certain stages of decision making, which should be followed step by step.

Decisions made by the teachers at the planning stage are essential for augmenting student success. According to Shavelson and Stern (1981), teachers' planning decisions process includes four components; (1) developing observable descriptions of student learning that are to result from instruction, (2) identifying the student's present capability or entry knowledge, (3) designing an instructional sequence or strategy that will most likely move students from their present capabilities toward immediate and long-range instructional outcomes,(4) anticipating a method of evaluating outcomes in order to design subsequent instruction (Ysseldylle et al, 1987, p. 28). Each step from these includes a certain type of decisions. According to Ysseldylle, Thurlow and Christenson (1987), the literature identifies

some components of effective instruction related to teachers' decision making; a framework in which different decisions are made through certain stages. The framework consists of:

- Diagnostic decisions (e.g., assessing the actual level of student performance),
- Goal-setting decisions (e.g., the teacher's desired level of performance for the student)
- Prescription and monitoring decisions (e.g. Instructional modifications made in order to close the gap between the actual and desired levels of student performance)
- Evaluation decisions (e.g., methods to evaluate effectiveness of teaching methods).

(Ysseldylle et al, 1987, p. 36)

However, according to Sherman (1980) it is widely admitted that the process of making instructional decisions contains five components as presented by D'Zurilla and Goldfried (1971); general orientation, identifying intended outcomes, generation of alternatives, decision making, and verification. These components have been described with special focus on their relation to the whole process as follows:

- The first component relates to the way in which the decision-maker deals with the decision situation.
- The second component is the identification of desired outcomes from the decision and gathering sufficient supporting information.
- In the component of generating alternatives, the intent is to adequately explore alternative approaches to desired outcomes so that a good choice can be taken.
- In the decision making component various alternatives are considered and the most likely to succeed chosen for implementation.
- The last component is validation in which. teachers evaluate if their decisions are appropriate and effective or not. (Sherman, 1980)

Historically scientists have emphasized two basic models of decision making: the rational model and the bounded rationality model (March, 2010 as cited in Lunenburg, 2010, p. 1). In the rational model, decisions are made under certainty which is based on perfect information about all alternatives and their consequences and on the ability of the decision maker to make an optimal choice among them and to implement it. On the contrary, in bounded rationality model, decisions are made based on incomplete comprehension of the problem and inadequate consideration of all alternatives and their consequences (Towler, 2010; Simon, 1982, 1997, 2009, as cited in Lunenburg, 2010).

According to the rational model, Schoenfeld (2011) identifies six steps in the decision making process; which are identifying the problem, generating alternative solutions to the problem, evaluating the alternatives, choosing an optimal alternative, implementing the decision and finally evaluating decision effectiveness (as cited in Lunenburg, 2010). In this way, decision making is a logical sequence of activities. An attempt to present a model that includes components from the aforementioned models have been illustrated in the following figure.
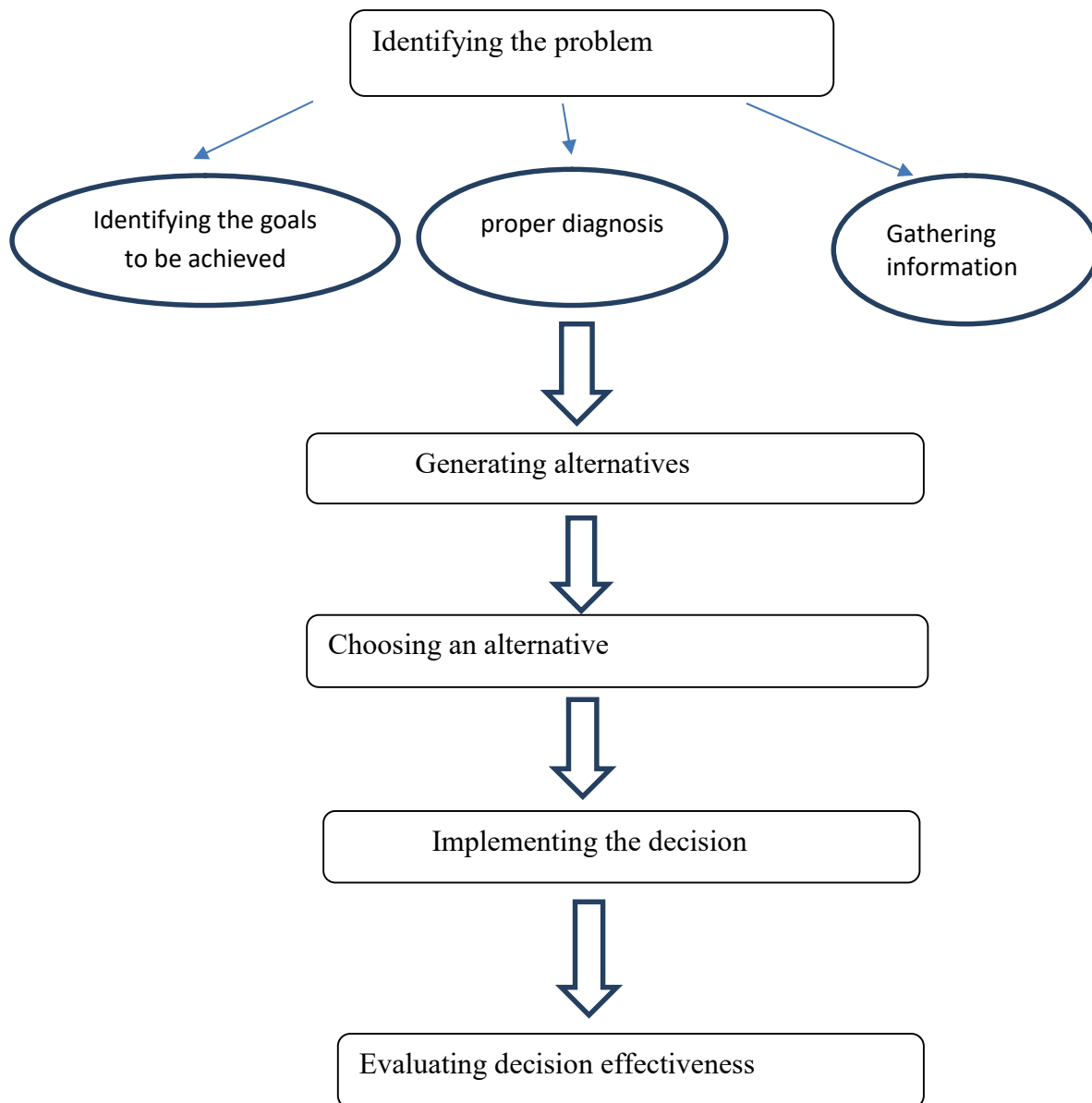
Figure 4.3. The decision-making process (adapted from Lunenburg, 2010)

Lunenburg (2010) provides a detailed explanation of each stage, and which is as follows: ***Identifying the problem*** is the most important step in decision making since it affects

the type and quality of decisions. Different definitions of problems and situations in which they arose call for different solutions and they may mislead effective decisions. A decision can be effective if it succeeds to help the teacher to achieve a specific objective. ***Considering the goals to be achieved*** becomes the basis for identifying areas of problems. Thus, ***a proper diagnosis*** is very relevant for determining the nature of the problem and its causes through ***gathering relevant information*** using a variety of tools and sources. It helps to identify the gap that exists between the current performance level and the expected one. Kepner and Tregoe (2005) developed a method of problem analysis that includes: (1) problem identification including defining the identity, location, timing and the size of the problem deviation, (2) definition of what the problem is and is not, (3) prioritizing the problem through giving the problem priority with other problems, to clarify its relative importance, and finally (4) testing for cause-effect relationships (Kepner & Tregoe, 2005, as cited in Stanković et al, 2016 and in Neubauer and Schilling, 2005).The next stage in the process of decision making is ***generating alternatives*** to the problem. Developing the alternative solutions to the problem depends on the goals intended to be achieved. Teachers must gather sufficient information of the possible alternatives and their likely consequences. In the next stage in the decision-making process, the teacher should ***evaluate*** each of ***the alternatives*** generated previously in terms of the extent to which they are feasible and satisfactory. Once the alternatives have been evaluated, the best one should be chosen, and then implemented. Finally, the last step is evaluating the effectiveness of the implemented decision to achieve the desired results (Lunenburg, 2010, pp. 3-7). After conducting the pedagogical support, we cannot believe that the problem has gone away, but it is necessary to evaluate this support and calculate the degree of development in overcoming the academic difficulties, otherwise the problem is in the support itself, it must be reconsidered.

Although the models have a different order of steps, they are similar in that certain guidelines must be followed to make effective decisions. Though each one has his own perception on this order, what is important is that they should include all these components. This is for the purpose of having an in-depth and thorough understanding of the situation and its possible and effective solutions.

Learning seems to result if the teacher succeeds to make the right choices through following such guidelines. Grammar teaching seems to be enhanced when the teacher's decision-making is as effective as possible. Effective teaching of grammar is based on the ability of making the best instructional decisions of grammar.

4.5. Grammar Teaching as Decision Making

Grammar Instruction has an important role to play in learning a foreign language more effectively. Instruction means simply education or teaching. It refers to the teaching and learning process in which knowledge, skills and manners are acquired. It is defined also as "the purposeful direction of the learning process" (Huitt, W. 2003). In the same way, Stepich et al (2009) define it as the deliberate arrangement of activities (including presentation, practice, feedback and assessment) designed to facilitate achieving specific learning outcomes. The main role of teachers is to educate learners and change their knowledge and behaviours in positive ways. Accordingly, their chief task is to help them to know and do new things which they did not know or be able to do before. To accomplish their job efficiently, teachers should determine exactly what they want from their learners as knowledge and level of mastery, and which best ways should be used to come at this goal. To achieve that, they need to have sufficient information about the current academic status of all learners in the classroom including knowledge, skills, beliefs, interests and learning styles. Depending on these data, they make appropriate decisions through selecting the appropriate teaching strategies and techniques, the suitable materials and resources to foster these expectations or learning outcomes and so on. In the concept of teaching as decision making, Cooney (1981, p. 67) says that:

> *Teaching is a process of gathering information, making a diagnosis, and constructing a response based on that diagnosis. While much of this process may be quite automatic, some situations require conscious decision making. The act of generating and considering alternatives in constructing a response-- that is, making an instructional decision--is of paramount importance in teaching.* (as cited in Duffy and Ball, 1983, p.5)

Certain basic assumptions that people make about effective teachers are related to instructional decision-making skills as stated in The work of Leslie Owen Wilson (2021). Effective teaching of grammar is based on the ability of making the best decisions of instructional grammar delivery concerning the content and processes to teach and how best organize and deliver that content in the most efficient and successful ways. The majority of teachers of English as a foreign language have their own set of personal perceptions and beliefs of grammar instruction and how grammar should be taught. These own perceptions have a great influence on their instructional decisions-making. However, they can easily

shape their use of specific instructional practices and make alternative decisions for better instruction delivery depending on current situations and data. Planning a unit or lesson is based on a number of instructional decisions. Important considerations should be taken into account before planning instruction as a key component to instructional effectiveness. Effective teachers have to determine first the content and processes to be taught and their learners' strengths, weaknesses and interests. Evidences from their students' performance form the basis of their instructional decisions making. Accordingly, they keep using what is successful and change what is not. They should adapt their teaching models, strategies, methods, and skills and other classroom techniques to get all learners achieving the intended academic goals. Such decisions are of great importance due to its great influence. Thus, they should be made with great awareness to serve the purpose they are intended for.

Effective instructional decision-making is the basis to effective instruction and an essential component of teacher effectiveness. Effective teaching is not a set of general and routine practices practiced by the teacher on a daily classroom practices. Rather, it is a set of correct and effective decisions driven by the context and taken based on the data obtained from the student and the educational situation. Glickman (1991) states:

> *Effective teaching is not a set of generic practices, but instead is a set of context-driven decisions about teaching. Effective teachers do not use the same set of practices for every lesson . . . Instead, what effective teachers do is constantly reflect about their work, observe whether students are learning or not, and, then adjust their practice accordingly* (Gupta, 2020, p. 156).

Indeed, making right and valid decisions is not an easy task, "nothing is more difficult, and therefore more precious, than to be able to decide" (Napoleon Bonaparte, as cited in Parcon, 2006, P. 1). But, the teacher should do his best to make important practical decisions based on in-depth thinking about the problem and the appropriate decisions to solve it among the available alternatives in order to reach the goal he wants.

However, there are some essential considerations must be taken into account to make effective decisions. These major considerations can be classified as primary considerations and secondary considerations.

4.5.1. Major Considerations to Make Decisions

Important considerations should be taken into account before planning instruction as a key component to instructional effectiveness. As stated by Airasian (2016, p. 39), the instructional process consists of three basic steps which are planning instruction, delivering the planned instruction and assessing how well learners achieve the expectations or outcomes that are included in the plan. However, the planning stage is the most sensible stage since it is the stage in which major considerations and decisions are made concerning many aspects. Before instruction starts, the teacher employs diagnostic assessments to obtain information to help make decisions about instructional planning. These information concern a variety of areas including mainly the students' strengths, weaknesses and misconceptions. The first main step in this stage is to identify the expectations or the learning outcomes that learners are expected to achieve. Teachers should define the overall instructional objective and its sub-steps to be followed. More importantly, this phase includes the consideration of the students' characteristics, teaching strategies and techniques, the selection of the suitable materials and resources to foster these expectations or learning outcomes and organizing instruction into a coherent and reinforcing sequences (Airasian, 2016).

The instructional decisions teachers make should be based on some considerations. Leslie Owen Wilson in the work (THE SECOND PRINCIPLE) summarizes them into the following points. Some are classified as primary and others as secondary; primary considerations include the teacher's desired level of performance for the learners, the nature of the content and concepts intended for teaching, preferred teaching style and knowledge of the target learners (including their current level, learning styles, instructional preferences, and their educational, social and cultural backgrounds). However, secondary considerations which are also of great importance consider the desired level of learning whether basic, intermediate, or mastery level, the size of the class, time allotment and importance given to the information or skill in the curriculum and its placement in the curriculum (whether other courses build on later or not), and finally the availability of materials and financial support for activities.

These considerations and factors have a great role and impact in determining the type of the decision made. Working with small classes is not the same as working with large ones. Teaching mixed ability classes that involve different levels of learners with different needs requires from the teacher to use different methods and strategies, carefully selects topics and activities and adapt the given materials. For effective grammar instruction, teachers have to

make informed choices from among alternatives that are best suited to their style of teaching; the complexity degree of the point they teach (content and process); and their learners instructional needs and learning styles.

4.5.2. The Instructional Grammar Delivery Framework

The search for successful teaching strategies has been always the concern of many debates. Grammar as an essential component in any language has been given much importance for the purpose of finding out effective strategies of grammar instruction to achieve grammatical proficiency. At the planning phase, teachers select tasks and objectives as well as the actions to achieve them; and this requires decision-making, that is, choosing future courses of action from among alternatives (Weihrich, 2013, P. 30) . Gordon (2008) defines decision making as "*a process that chooses a preferred option or a course of action from among a set of alternatives on the basis of given criteria or strategies*" (Wilson & Keil, 2001; Wang et al., 2004; as cited in Gordon, 2008, p. 237). In this context, the decision maker to come at the chosen decision, he is involved in a number of cognitive tasks which involve his thoughts, philosophies and beliefs about teaching, past experiences, an in- depth analysis of the situation and the possible efficient decisions.

Teachers to make decisions about teaching and learning have to understand the levels associated with instructional decision making and make informed choices from among alternatives that are best suited to their style of teaching; the subject they teach - both its content and process; and their learners instructional needs (Wilson, 2021). As mentioned previously, making right and valid decisions is not an easy task, "*nothing is more difficult, and therefore more precious, than to be able to decide"* (Napoleon Bonaparte, as cited in Parcon, 2006, p. 1). But, the teacher should make an in-depth thinking about the problem and the alternatives available to him to make the right instructional choices. These choices concern the instructional models and their corresponding strategies, methods and techniques.

As there is a confusion in their meanings, it is essential to note the difference between the terms model, approach, method, strategy and technique. Learning model is a frame which involves the application of a particular approach and its strategies, methods, and techniques of learning. Approach deals with general philosophies of teaching and it a set of theories and principles. A method is the way you apply these theories and principles. Learning strategy is still conceptual, necessary for the implementation of certain teaching methods. Methods are

the way we teach whereas approaches explain why we teach that way. So, the strategy is "a plan for achieving goals" while the method is "a way for achieving goals". However, technique is a procedure or skill for completing a specific task (Adapted from Educational Language Learning, 2015, and Sehat Bugarr Bahagia, 2016).

In the following stage, we are going to present the general conceptual base and instructional framework for understanding the levels associated with instructional decision making include instructional models, strategies, methods, and skills depending on those presented in (Saskatchewan Education, 1991) and then dealing with those suitable for grammar instruction. All are adapted from (Saskatchewan Education, 1991) and they are as follows.

4.5.2.1.   Instructional Models

Joyce and Weil (1986) identify four models: information processing, behavioral, social interaction, and personal. Information Processing emphasizes the acquisition, mastery, and processing of information based on the cognitive functioning of the learner. Personal model focus is on the development of the individual's self-concept involving the development of the processes a learner uses to build his knowledge and skills. Social Interaction model focuses on the personal and societal relationships among people. The focus is on improving the student's ability to interact with others and work productively in society. The behavioral model emphasizes changing the visible behaviour of the learner to be consistent with his or her own self concept. As a result of its basis in the stimulus control/reinforcement theories, the behavioral model of instruction stresses that learning tasks should be broken into a series of small, sequenced tasks and behaviours (Saskatchewan Education, 1991).

4.5.2.2.   Instructional Strategies

Five categories of instructional strategies as quoted and adopted from Saskatchewan Education (1991) are direct instruction, indirect instruction, interactive instruction, experiential learning and independent study. Their meanings as cited in the same reference are as follows. The Direct instruction strategy is highly teacher-directed. It is effective for providing information or developing step-by-step skills. This strategy includes methods such as lecture, didactic questioning, explicit teaching, practice and drill, and demonstrations. The indirect instruction strategy known also as inquiry, induction, problem solving, decision making, and discovery, is mainly student-centred. It seeks a high level of student involvement

in observing, investigating, drawing inferences from data, or forming hypotheses. Examples of indirect instruction methods include reflective discussion, concept formation, concept attainment, cloze procedure, problem solving, and guided inquiry. In indirect instruction, the role of the teacher shifts from lecturer to a facilitator, supporter, and resource person. Interactive instruction relies heavily on discussion and sharing among participants. Students can learn from peers and teachers. These may include total class discussions, small group discussions or projects, or student pairs or triads working on assignments together. Experiential learning is inductive, learner centred, and activity oriented. The emphasis in experiential learning is on the process of learning and not on the product. It is a cycle consisting of five phases; experiencing (an activity occurs), sharing or publishing (reactions and observations are shared), analyzing or processing (patterns and dynamics are determined), inferring or generalizing (principles are derived); and applying (plans are made to use (earnings in new situations). Independent learning as quoted in Saskatchewan Education (1988, p. 53) has implications for responsible decision-making, as individuals are expected to analyze problems, reflect, make decisions and take purposeful actions. To take responsibility for their lives in times of rapid social change, students need to acquire life-long learning capability. As most aspects of our daily lives are likely to undergo profound changes, independent learning will enable individuals to respond to the changing demands of work, family and society (Saskatchewan Education, 1991).

4.5.2.3.   Instructional Methods

We attempt to state some methods related to the five strategies presented previously as quoted in (Saskatchewan Education, 1991). Direct instruction is usually deductive. Possible methods in this strategy can be structured overview, lecture, explicit teaching, drill and practice, compare and contrast, didactic questions, demonstrations, guided and shared - reading, listening, viewing, thinking tasks. Possible methods in indirect strategy can be problem solving, case studies, reading for meaning, inquiry, reflective discussion, writing to inform, concept formation, concept mapping, concept attainment and cloze procedure. Possible methods in interactive instruction strategy can be debates, role playing, brainstorming, peer partner learning, discussion, group work, (think, pair, share), cooperative learning, problem solving, tutorial groups and interviewing. Possible methods in experiential learning can be field trips, narratives, conducting experiments, games, storytelling, model building and surveys. Independent study refers to the range of instructional methods which are purposefully provided to foster the development of the self-improvement of individual

learners. They can be essays, Computer Assisted Instruction, learning logs, reports, correspondence lessons, learning contracts, homework, research projects and assigned questions.

4.5.2.4. Instructional Techniques

As cited in Saskatchewan Education (1991), instructional skills or techniques are the most specific teaching behaviors. Generally, they are explaining, demonstrating and questioning. Lessons need most of time explanations and demonstrations of concepts either to the whole class, a small group, or an individual. Explanations help learners to understand detailed concepts or generalizations. Shostak (1986) suggests that an explanation can show:

- a cause and effect relationship (for example, to show the effect of adding an acid to a base);
- that an action is governed by a rule or law (for example, to show when to capitalize a noun);
- a procedure or process (for example, to show the operation of solving a mathematical equation); or,
- the intent of an activity or process (for example, to show the use of foreshadowing in drama). (Saskatchewan Education, 1991).

Concerning demonstrations, research reveals that they are most effective when they are accurate, when learners are able to see clearly and understand what is going on, and when brief explanations and discussion occur during the demonstration (Arenas, 1988, as cited in Saskatchewan Education, 1991). Teacher mastery of questioning technique, wait time, and levels of questions is essential. Question can be addressed to the entire class or a specific student. Providing time to answer a question and after a student response gives learners time to reflect on the responses. Questions should include questions of recall or comprehension and also for challenge that require analysis, synthesis, or evaluation. (Saskatchewan Education, 1991).

A general overview of instructional models, strategies, methods, and skills in general has been provided. In following the principles of a particular method to teach grammar, teachers may face various teaching constraints. Thus, to make decisions teachers should focus on curriculum, the prior students' prior knowledge, their interests and abilities, their learning styles, and take what suits and benefits their learners and reject what causes difficulties.

4.5.3. General Guidelines for Grammar Teaching

How grammar should be taught and what grammar learning necessitates to be enhanced have been always the concern of many researches along time. The first and most important necessity is preparation of lessons. Good preparation of lessons is an effective factor of effective teaching. For teaching any English lesson, it is necessary to prepare it in advance. The same thing should be done with grammar lessons. In this part, many considerations should be taken into account to make the necessary instructional decisions. Planning gives lessons a framework and it is as a guide that involves what is intended to achieve and the way to do that (Harmer, 2007). Taking time at the planning stage to think about all what can make their lessons effective and successful and about the steps to present them help to have good lessons. First of all, it is important to determine the objective of the lesson and sometimes the sub-objectives that lead to the final one as well as the learning outcomes at the end of the lesson. The activities should be selected carefully and presented in a logical order to achieve the objective of the lesson and should have a logical link so that pupils can follow easily since "*a good lesson needs to contain a judicious blend of coherence and variety*" (Harmer, 2007, p.157). An important step in this phase is deciding which type of instruction can be better efficient with those learners; accordingly, the teacher can use one type of activities or vary them in complexity.

The teacher should know how to present and explain them. This explanation should be short and clear. It is useful to predict problems that might be encountered during the lesson. Taking time at the planning stage to suggest possible solutions can lead to have good lessons. In this respect, Killen (2006) suggests some useful planning steps to plan lessons effectively: Considering the purpose of the lesson, determining the pupils learning outcomes and their current level, determining the content of the lesson, organizing in suitable sequences and appropriate examples, selecting appropriate teaching strategies, determining the possible constraints, planning ways of evaluating the success of the lesson and assessing the pupils' achievement.

The steps of grammar lesson plans depend on the lesson itself, time available, pupils' level and learners' styles. There are different models of planning a grammar lesson such as PPP (Presentation, Practice, Production), TTT (Test, Teach, Test) and ESA (Engage, Study, Activate) (Cotter, 2010). Sárosdy (2006) adds another essential step with which each lesson must be closed; that is a feedback part of both form and content.

Concerning ways of teaching grammar, it can be taught explicitly or implicitly. "*Explicit instruction is where pupils are instructed in the rules or patterns (deductive) or guided to induce them, themselves (inductive). An implicit approach makes no reference to rules or patterns*" (Larsen-Freeman, 2009, p. 527).

Mastering key grammatical concepts helps EFL learners to achieve both accuracy and proficiency in English language. It can be achieved through explicit grammar teaching. This is what has been noticed in many current educational research and practice that emphasize the importance of providing EFL learners with explicit instruction in the rules and forms of English grammar to achieve academic language proficiency (Stathis and Gotsch, 2013).

A research conducted by Norris and Ortega (2000) focused on various studies was done for the purpose of determining whether grammar teaching is effective or not. These research findings argue that explicit grammar instruction is more beneficial than implicit teaching (as cited in Larsen-Freeman, 2009). Moreover, they emphasize the focus on forms and forms in meanings too.

Explicitly or implicitly, grammar teaching has been remained one of the most debatable concerns of English language teachers. However, choosing a particular approach to grammar teaching is another controversial issue.

In following the principles of a particular method, teachers may face various teaching constraints. Thus, eclecticism that is "*choosing between the best elements of a number of different ideas and methods*" seems to be the best choice (Harmer, 2007). Therefore, adapting an eclectic approach in which teachers take what suits and benefits their learners and reject what causes difficulties, has been proved to be beneficial. In the same class, the teacher can use varieties of strategies and methods of teaching with different groups at the same time according to their learning styles.

Using of teaching methods differs according to different situations. In this way, teachers need to make a balance between introducing structures deductively and inductively. Moreover, eclecticism in teaching grammar enables teachers to develop pupils' grammar competence as well as the ability to use it appropriately. Cowan (2008) suggests some points to guide teachers to choose what to incorporate in their classroom instruction. These points support the usefulness of collaborative language instruction, explicit grammar instruction mainly for new grammatical structures, correcting errors mainly through recasting, focusing

on the most utilized grammatical structures and incorporating input processing and output practice which means that learners should be provided with comprehensible and rich input so as to be able to produce language actively.

Adapting an eclectic approach to teach grammar helps teachers to accept new trends in grammar teaching as far as they suit situations and improve learning. Some effective suggestions for teaching grammar in the classroom have been advocated recently such as teaching grammar in context, involving learners in problem solving activities, reducing the use of metalinguistic terminologies and *computer assisted language learning* (CALL).

Teaching grammar in context has been found to be effective. It involves teaching grammatical structures in relation to their meanings and functions within contexts. This enables learners to know the use of particular structures and makes them learn better (Ellis, 2008, as cited in Shrum and Glisan, 2009, p. 218). Moreover, involving learners in problem-solving activities in which they analyze language explicitly is an effective strategy to find out grammar structures. They are exposed to language samples and asked to work out of them by themselves formulating their own suppositions which lead to the construction of the correct grammar structures. In this way, pupils are expected to not forget the rule and the sentences in which it is presented and that may enhance grammar learning (Senoussi, 2012).

An efficient new way to make pupils better learn grammar is through the use of electronic technologies. Many studies advocate the benefits of (CALL) in improving learners' grammar and editing their persistent grammatical errors (Cowan, Choo and Lee, 2005, as cited in Cowan, 2008). Pupils can familiarize themselves with learning in such way through going to the Web sites.

Furthermore, it seems to be effective to avoid teaching too many grammatical structures in one session, which may cause them confusion. The choice of examples in which grammar is presented is of a paramount importance. Thus, they should be selected in such way to facilitate grammar learning. They should be simple, clear, meaningful and serve efficiently the acquisition of the intended grammar structure.   Practice tasks should be chosen carefully. They should promote pupils to use grammatical structures accurately and meaningfully. They should meet the pupils' needs and interests and raise their motivation.

To facilitate understanding of grammatical structures and the sentences in which they are introduced, the use of mother tongue has been proved as a beneficial means mainly with

low level learners (Senoussi, 2012). In the same vein, Leonardi (2010) claims that in spite of the fact that there are still negative attitudes towards the use of L1 and translation in FL classes, many theoretical researches and practical experiments have proved that their use can facilitate learning. Some of the research studies that are in favour of systematic use of L1and translation are Chambers (1991), Auerbach (1993), Antόn and DiCamilla (1999) and Cook (2001). According to Cook (2001), a purposeful and systematic use of L1 in FL classes can help:

- *Explain grammar*
- *Convey meaning*
- *Organize the class (instructions, feedback, discipline)*
- *Pupils realize what they really know or do not know.*

(as cited in Leonardi, 2010, p. 62)

However, *"the amount of L1use and how it is employed should vary with classroom environment and learner needs analysis"* (Leonardi, 2010, p. 63).

A framework of how teachers can respond to data and adapt their instructional strategies, methods, and skills and other classroom techniques to help their learners achieve the desired learning outcomes has been proposed as a conceptual base. Other areas of decisions are also mentioned including the necessity of providing special instruction for special learners with different grammar learning strategies and abilities.

4.5.4. Providing Special Instruction for Special Learners

EFL learners differ from each other in learning grammar in spite of the fact that they study under the same learning environment and conditions. Students have different social backgrounds, personalities, abilities, strengths, deficits, interests and learning styles which affect their achievement. Hence, one of the major considerations that teachers should take into account before making instructional decisions is their learners' differences. Accordingly, they can provide special instruction depending on these differences including their different learning strategies.

4.5.4.1. Different Learners with Different Grammar Learning Strategies

All students have different personalities and learning styles and this influences their attitudes towards learning English grammar. They use different learning strategies that suit

their own abilities and interests. Hence, one of the major considerations that teachers should take into account before making instructional decisions is their learners' learning strategies. In this way, they can plan lessons and tasks depending on their preferred learning styles.

Language learning strategies are related to the ways that the foreign language learners use to learn a foreign language. They refer to *"how language learners manage their learning and the strategies they use as a means of improving TL competence"* (Hurd and Lewis,2008, p. 8). As far as grammar is concerned, grammar learning strategies refer to the techniques that foreign language learners use for the purpose of improving their knowledge and comprehension of the grammar of the target language. Takač defines them as the *"learning strategies that help learners to develop a mental grammar of the L2"* (2008, p. 32).

According to Oxford (1990), language learning strategies can be divided into two broad categories that are applied in education: direct strategies and indirect ones (as cited in Sung, 2009, p. 22). They may have a direct relation with the mental process of language learning or just supporting learning. Direct language learning strategies are defined as the strategies that are involved in language learning and require mental processing of language. However, indirect leaning strategies are not involved in the learning of the target language but support the learning process (Pandian et al, 2014).

As stated by Oxford (1990), direct strategies are subdivided into three types involving cognitive, memory and compensation strategies. However, indirect strategies comprise metacognitive, affective and social strategies (as cited in Sung, 2009, p. 22). In using cognitive strategies, pupils *"are encouraged to think about what they are seeing, hearing or working on rather than just repeating mindlessly"* (Harmer, 2007, p. 270). This thinking involves operating the incoming information and manipulating it in such manners that improve learning (O'Malley and Chamot, 1990). According to them, it may include such strategies: organization, elaboration, inferencing, summarizing, deduction, induction and so on. Memory strategies are mental means which facilitate storing and retrieving new information for future access. These involve some strategies such as rehearsal, organization and retrieval (Courage and Cowan, 2008). However, language learners use compensation strategies to understand or produce the target language in spite of the limitations in their language knowledge. The main compensation strategies used in listening and reading are guessing the meaning from the context and overcoming limitations in speaking and writing through miming, gestures, synonyms, circumlocution, simplification, coining words,

avoidance and so on. This type of strategies is used specially for grammar and vocabulary (Oxford, 1990).

Indirect strategies comprise metacognitive, affective and social strategies (Oxford, 1990, as cited in Sung, 2009, p. 22). Learners use metacognitive strategies to organize and self-direct their language learning since they are who best know various aspects of their own leaning. O'Malley and Chamot (1990) note that *"they involve knowledge about learning, knowledge of one's cognitive process and control or regulation of learning"* (as cited in Gimeno, 2003).Affective strategies have a great impact on learners' success or failure as they can gain control over their learning through their emotional actions and affective behaviors such as anxiety reduction, self-encouragement as self-rewarding and monitoring emotions as using checklists and discussing feelings with others (Oxford, 1990, as cited in Hurd and Lewis,2008). Social affective strategies include social behaviours which are asking questions, cooperating with others and empathizing with others. According to Oxford and Lee (2007), foreign language learners can use learning strategies either for explicit- inductive learning such as obtaining and using resources as grammar notebook and reasoning or for explicit-deductive learning such as paying attention to grammar rules and expectations, conceptualizing with details and using the senses to understand and remember (Oxford, 2013). These strategies can rely on deduction, induction, translation and transfer (O'Malley and Chamot, 1990).

Before planning the organization of teaching, teachers need to have a clear picture in their minds on their students' preferred learning strategies. This knowledge forms the basis to select the appropriate teaching approaches and methods to facilitate their acquisition of grammar; whether it should be taught deductively, inductively, or implicitly and explicitly.

The teacher should use deductive method with students with low level of grammar competence or with those who like explanations and do not feel comfortable when they lack a clear understanding of the course. On the contrary, others who are more tolerant of getting the information by themselves and do not feel need for detailed explanations, are best taught inductively.

Acknowledging that learners have different learning styles, strengths, deficits and interests which should be taken into consideration. One of the most difficult problems which EFL teachers usually face is mixed ability class which is defined as a class with different levels of competence and ability. This leads to recognizing the need for differentiated

instruction rather than whole-group instruction. So, under which circumstances can the teacher select the effective way of instruction?

4.5.4.2. Whole-group Instruction

Whole group instruction called also whole class instruction or general instruction is defined by Meador (2019) as "a teaching method where the teacher provides direct instruction to the whole group—usually a class". Whole-class instruction is intended for all the learners of the entire class when all of them do not succeed in acquiring most or some parts of the lesson or doing activities correctly. In this case, the teacher has to give general support through repeating the entire lesson or part of it in the same way or try different approaches or strategies. This is in the case of remedial teaching when using assessment data to revise instruction. However, diagnostic assessment before instruction starts can provide teachers with valuable information about learners' abilities and readiness to get the new knowledge and skills. In case of general failure to perform correctly, whole class instruction is beneficial to deliver the content specially for the poorest areas in which learners are deficient. Whole group instruction is also suitable when the overall learners' current level in that point and what it includes is far from the expected one and the desired goals. Hence, this general instruction is provided to the class as a whole to remove the problem in learning when all the learners have the same difficulty. In this context, O'Meara (2010) states that:

> *Whole-group instruction should be used when the instruction needs to be consistent for all learners… Whole-group instruction should be considered as an instructional delivery model before or after a time when students have been engaged in independent practice of the facts and skills needed for a lesson.*

(O'Meara, 2010, p. 76)

Some values of whole group instruction in the classroom are mentioned in the following notes:

- Whole group instruction is direct instruction which is typically provided through teacher-led direct instruction.

- But the students will also participate by answering questions and providing examples.

- Questioning techniques are effective for whole group instruction.

- Whole group instruction gives the teacher the opportunity to present the basic concepts to every learner at once.

- Planning for whole group instruction is easier than planning for a small group or individual instruction.

- Whole group instruction includes one plan and one approach unlike differentiated instruction.

(Meador, 2019; Kelly, 2018)

If the teacher notices from the data obtained that the learners do not have common difficulties, it is better to explore this valuable time for reinforcing their skills and abilities into appropriate groups depending on their specific needs. This can be done through differentiated instruction.

4.5.4.3. Differentiated Instruction

A pedagogical decision is a planned act that determines the type of appropriate actions to deal with a particular pedagogical problem. Instructional decisions differ according to the learners' achievement results and their diagnosed learning difficulties. However, EFL teachers commonly face mixed ability classes which involve learners with very different abilities. In this case, how can teachers achieve special support for individuals or small groups? The answer is through differentiated instruction. Differentiated instruction is described by Carol Ann Tomlinson as factoring students' individual learning styles and levels of readiness first before designing a lesson plan (as cited in Weselby, 2021). In more details, it is defined in Guidance for West Virginia Schools and Districts (2012) as

> *A teacher's response to learners' needs including respectful tasks, flexible grouping and ongoing assessment. Teachers can differentiate content, process or product based on students' readiness, interests and learning profiles. A process of designing lesson plans that meets the needs of the range of learners; such planning includes learning objectives, grouping practices, teaching methods, varied assignments and varied materials chosen based on student skill levels and learning preferences."* (as cited in Guidance for West Virginia Schools and Districts, 2012, p. 42)

Hence, when the teacher evaluates the performance level of his learners, he can make the right decisions to get the necessary instructional support. Differentiating this instructional support deals with differentiating the content to be taught, the way in which this content should be taught, and finally the final product that shows comprehension and learning based on the learners' characteristics. Such necessities should be part of the lesson plan.

Depending on the performance level of learners that can be gotten through assessments, teachers can provide special support for individuals or small groups through first identifying the weaknesses or needs of the whole class, then splitting them into individuals or groups according to their weaknesses. They should choose the appropriate activities for each group or those individuals for the purpose of helping everyone to overcome his difficulties.

As mentioned previously, placing learners in appropriate groups to provide differentiated instruction can be through small groups of learners known as group instruction or for individuals as individualized instruction.

Group instruction strategy helps teachers to carry out tasks with different groups simultaneously. However, those groups can be homogeneous or heterogeneous. A *homogeneous group* includes a number of learners who have common areas of weaknesses and difficulties. Those learners commit the same errors in the same activity or they have close gaps that require their placement in small groups according to their needs. In this case, the teacher presents the supporting activities to the group based on their needs and difficulties. Such type of group instruction helps him to carry out different activities simultaneously depending on the different needs of learners. For instance, in teaching conditionals to learners, one group could be working on the basics of simple tenses, others on more complex tenses while a more advanced group could be working on types of conditionals and their different functions.

However, *a heterogeneous group* is intended for groups of different levels of skills and abilities. This type of support is mainly done through integration, sharing and cooperation within the group. In addition to serving such competencies, such type of group instruction would reduce the teacher-centered approach in the classroom and help him to carry out different activities simultaneously depending on the different needs of learners, such as providing individual or group support with the assistance of each other since learners can learn from each other.

Individualized instruction is an instruction directed to one learner. Itis intended for individuals to attend difficulties by using special strategies. In this type of instruction, each learner is attended individually depending on his learning difficulty taking in consideration his leaning abilities, learning style and interests. The teacher can provide additional support through assigning tasks to be done independently. Individualized instruction is defined as a technique where the pace, content, and method are tailored to the individual needs of each learner (StateUniversity.com, 2010, as cited in Management Association, Information Resources, Blanco et al, 2014, p.628). According to this definition, adapting the structure of the instruction and the methods through which these structure should be taught to meet the needs of the individual learners and their pace of learning is in the core of differentiated instruction.

However, and in spite of the fact that getting learners split into appropriate groups to get the necessary support is an effective way to improve learning, most of teachers are afraid of using differentiated instruction strategy because they see it as an exhausting activity. Their main reasons may be the preparation of different instruction according to the different needs of their students which consumes much time and efforts, the possible inability of managing classes in such type of instruction, and the need for assisting every learner. Giving judges about something without sufficient information is unfair. What teachers need is to have efficient resources and know instructional practices that made using differentiated instruction quite possible and feasible without troubles and unbearable fatigue.

4.5.4.4.   Strategies of Differentiated Instruction

Differentiated instruction may involve teaching the same content to all learners using a variety of instructional strategies, including providing lessons and assignments of varying topics or levels of difficulty based on each student's ability, leaning styles, interests and time needed (Weselby, 2021). According to Tomlinson as cited in Weselby (2021), there are four ways of differentiating instruction: content, process, product and learning environment. Varying instruction according the aforementioned ways can be trough:

1. Varying **Conten**t: *changing up what is taught.*
2. Varying **Process**: *changing up how it is taught.*
3. Varying **Assessment**: *changing up how it is assessed.*
4. Varying **Learning Environments**: *changing up the context of learning.*

(Drew, 2020)

According to Limbu (2012), ***Content*** can be described as the knowledge, skills and attitudes that the learners are expected to learn. Differentiating instruction through the content to be taught involves teaching the same concepts to all learners but not in the same degree of complexity due to the different levels of learners' abilities. Moreover, learners do not learn at the same pace; there are faster learners as well as slower learners. Furthermore, instructional tasks should be aligned with instructional goals and objectives for determining the next step in learning for the different levels of learners. According to Weselby (2021), differentiating instruction through the content involves designing activities for groups of students that cover various levels of Bloom's Taxonomy and which are: remembering, understanding, applying, analyzing, evaluating, and creating. Depending on the pretest results, the teacher can identify learners of different levels of mastery of the content to be covered; those who have no idea could be asked to do tasks that require remembering and understanding, while other of some mastery can do tasks of applying and analyzing and those who have a high level of mastery can do more difficult task that require valuating and creating.

Differentiating instruction concerning grammar through the ***content*** to be taught involves teaching the same lesson to all learners but not in the same degree of complexity. Depending on the pretest results, the teacher can identify learners of different levels of mastery of the grammar point to be covered; those who have no idea could be asked to do tasks that require remembering and understanding such as, reordering jumbled elements of questions to get grammatically correct questions, while others of some mastery can do tasks of applying and analyzing; such applying the rules to form different structures of questions and those who have a high level of mastery can do more difficult task that require evaluating and creating such as writing an interview of their choice in which they involve different forms of questions.

Differentiating instruction through differentiating the ***process*** of teaching involves varying teaching strategies and methods. According to Weselby (2021), successful differentiated instruction involves delivering materials according to each student's preferred learning style (visual, auditory and kinesthetic, and through words), taking in consideration the preferred way of working (in pairs, in small groups or individually) and the amount of the teacher's support. Limbu (2012), emphasized the importance of flexible grouping and classroom management in differentiating instruction in the term of process. Most learners like to work together as they develop knowledge of new content through completing assigned tasks and discussing shared difficulties, but in a safe and supporting environment.

Differentiating instruction in term of the ***product*** means varying the complexity of the product that learners produce at the end of a lesson to demonstrate mastery of the content (Limbu, 2012). Learners could show mastery of content through tests, projects, reports or any other activities based on their learning abilities and preferred styles (Weselby, 2021). Varying product may include the following according to Limbu (2012):

- Levels of performance expectations vary depending on the students' levels.

- Initial and on-going assessment of student readiness and growth are essential.

- Students are active and responsible explorers who prefer interesting, engaging, and accessible tasks.

- Items to which students respond may be differentiated in terms of means of expression, alternative procedures, degrees of difficulty, types of evaluation and scoring.

Learning environment includes both physical and psychological elements such as providing various types of seats and arrangements to support both individual and group work and using different classroom management techniques to provide a safe and supportive learning environment (Weselby, 2021).

The main role and concern of any teacher considering teaching as a part from his life and a duty is to help his learners achieve their potential through overcoming all their difficulties in learning. Success in achieving this depends highly on the quality of his teaching practices including quality decisions and effective implementation. Each lesson should be considered as a sole and an important point in the programme to achieve in the most effective way until achieving all what is intended to be achieved. As the problem under study concerns forming wh-questions, we attempt to provide some guidelines for teaching grammar in general and wh-questions in particular with a special focus on how to deal with grammatical errors.

4.6.   Guidelines for Teaching Wh-questions

Any fruitful learning depends to a great extent on the teacher's abilities and his success in adopting different strategies appropriate to fit different contexts. For teaching any grammar area, teachers should have good knowledge of English grammar and the most appropriate ways to make their teaching effective and of their alternatives if adjustment is necessary. As an essential point in English grammar, asking questions is one of the most

important aspects of grammar in any language mainly English. So, how should it be taught and what necessitates should be taken to enhance its learning?

4.6.1. Suggestions for Teaching Wh-questions

Teachers need to identify the basic steps and grammar points required to teach certain structures. Depending on the diagnostic testing findings, they can identify what they know and can do and what they do not know and can't do. If the majority of learners show difficulties in certain aspects, more and special emphasis should be put on these aspects before instruction starts even if they are not included in the curriculum. In the same vein, Larsen-Freeman (2009) suggests adopting a 'grammar checklist' in which *"teachers have an unordered set of grammar structures they need to teach in a way that attends to their pupils' readiness to learn"* (2009, p. 530). This checklist may include grammatical structures that are not included in the syllabus, but needed as a basic step to teach certain structures. Based on the results obtained previously, the target learners had great problems with auxiliaries and verb forms, simple and complex tenses and how to insert the operator 'do'. This problem can be solved through teaching how to transform affirmative sentences into the negative forms and then how to transform them into the interrogative forms for the purpose of teaching how to ask *wh*-questions with the right use of auxiliaries and modals. In addition to that, it is very essential to make them distinguish between simple and complex tenses and make great emphasis on auxiliaries. In this way, teachers can determine steps in teaching intended grammar points at the moments when they can be teachable, and therefore they can be learnable. That means that they can set procedures in which the structures can be learned gradually and easily.

Another effective way of improving EFL learners' grammar competence is by following steps of developmental sequences in acquiring particular instructions. Learners in the process of forming their grammatical knowledge make several errors until they reach a final form. This is noticed by researchers as:

> *The end-state grammar (White, 2002) or stabilized grammar (Long, 2003) that means that the process of learning English is a process by which a learner begins to develop an Interlanguage, and that Interlanguage continues to grow more and more similar to the English grammar of a native speaker until it stabilizes (or reaches its end state)* (Cowan, 2008, p.46)

Accordingly, interlanguage refers to the grammar that develops during the second language learning process. This progress in learning takes place through gradual stages known as developmental sequences in L2 learning. What language teachers should do is to target errors committed in each stage and try to provide appropriate and sufficient instruction to help learners move on to the next one. Sometimes, errors continue to occur and become part of the final version of the learners' language system. These persistent errors need to be given more attention and emphasis from the teacher to be corrected. Moreover, teachers should be patient when pupils stuck to a particular stage and provide more practice and correction (Cowan, 2008)

In the case of producing grammatically correct questions, EFl learners make errors when applying the different structures. The development in the processing of these types of structures involves gradual stages in which some frequent grammatical errors appear. The role of the teacher is to address the kinds of errors that occur in each stage and puts more emphasis on the last ones to achieve accuracy. If the errors occur, recasting may be beneficial to draw the learners' attention to the grammatical errors to be corrected.

Producing grammatically correct *wh*-questions is one of the tasks suggested in BAC Exam. Pienemann, Johnston and Brindley (1988) identify four stages in which learners go through in attempt to produce *wh*-questions:

Stage 1: (Fragments or single words with raising intonation)

    Speak English?

Charles in house?

Stage 2: (Subject-verb order with rising intonation)

    He speak English?

    Charles is in the house?

Stage 3: (Insertion of do at the beginning of the sentence)

     Does he speaks English?

     Does Charles is in the house?

Stage 4: (Base from in the main verb; inversion of subject and verb)

    Does he speak English?

    Is Charles in the house?

                              (As cited in Cowan, 2008, p. 43)

Errors shown in stages 2 and 3 are common among EFL learners and they reflect imperfect learning. Learners may make progress in learning *wh-* questions if they are received instruction in advance, which emphasizes the next stage beyond the current one.

The learners' progress in learning grammar is evaluated through the degree of correctness of their responses and the quality and quantity of grammatical errors identified. That is why, it is important to know how to make use of these errors to improve learning.   e

4.6.2. Guidelines for Dealing with Grammatical Errors

Errors were considered as indicators of failures for a long time. However, there is a new tendency in which errors are regarded as indications of the process of learning. Drawing pupils' attention to grammatical errors and identifying their sources can be effective in calling their attention to grammatical forms. This can be also fostered through correcting them and involving pupils in rich structured input   of the target structures related to those errors. Furthermore, teaching some structures in gradual sequences can be beneficial to make learners avoid committing persistent errors. Some techniques are suggested to deal with those errors for the purpose of processing correct English grammar.

Correcting grammatical errors during the process of learning grammar structures and at the reproduction stage is important since accuracy is important for learners at the accurate reproduction stage (Harmer, 1991, as cited in Sárosdy et al, 2006). Thus, the main aim of error correction is to help learners learn the new grammar structures correctly.

The effectiveness of correcting grammatical errors depends on the kind of feedback provided from the teacher. Most research advocates the value of giving feedback in an affective and supportive manner (Larsen-Freeman, 2009). In the same vein, Cowan (2008) states that the effectiveness of correcting grammatical errors that learners are making depends on the interaction between teachers and their learners and how and which kinds of *feedback* from them can encourage learners to notice their errors and compare them with the correct grammatical structures. Their ability to become aware of their errors compared with the correct ones can contribute in the progress of improving their grammar. The question here is which techniques are the most efficient.

There are many techniques used to help pupils notice their grammatical errors and correcting them. One of them is *recasting. Recasting* is drawing the student's attention to what he has just said and expecting from him to correct himself (Cowan, 2008). One

technique is through repeating what the student says with explicit emphasis on the wrong forms to draw his attention and asking a question that calls for a correction. If the student cannot correct himself, his classmates respond if they know. Otherwise, the teacher supplies the correct answer. However, one problem with recasts is the possibility of ambiguity (Lyster, 1998, as cited in Larsen-Freeman, 2009). Learners cannot determine exactly what the teacher mean.

Recasts takes different forms. Harmer (1991, p. 106) suggests several strategies to indicate incorrectness, which are *repeating, echoing, denial, questioning* and *expression* (as cited in Sárosdy et al, 2006). *Repeating* involves asking the student to repeat what has just said with questioning intonation to show that something is wrong. In *echoing technique*, the teacher repeats what the pupil has just said with questioning intonation and asking for correction. Another technique of indicating errors is through simply saying that the answers are not correct. The teacher can also indicate correctness by *questioning* technique which means asking the whole class 'Is that correct?'. Facial impression or other gestures may be also used to draw learners' attention that something is wrong. However, the effectiveness of any technique depends on the way it takes place. It may discourage learners if it seems to be as a mockery (Sárosdy et al, 2006).

One technique of avoiding grammatical errors is through drawing pupils' attention to the possible errors that may occur. This technique is known as Preemptive Targeting of Errors.

According to Cowan (2008), many of the ungrammatical sentences that EFL learners produce result from two major sources, either the transferring of grammar rules from their native language to English or imperfect learning. Preemptive Targeting of Errors means directing the pupils' attention to the possible errors that they may commit in advance. One effective way of preemptive targeting of errors is through an adaptation of *processing instruction* (Cowan, 2008). The ungrammatical sentences that English language learners produce result from the transferring of grammar rules from their native language to English are called transfer errors. As explained in VanPatten (1996),

> *Processing Instruction involves three stages: (1) learners are given information about a particular linguistic structure (an explicit description) (2) they are then informed about a particular input-processing structure that might negatively affect their ability to make the form-meaning connection; and (3)*

they are "pushed to process the structure with structured input" – input that is manipulated so that the pupils have a better chance of attending to it.

(as cited in Cowan, 2008, p.37)

These procedures start with explicit teaching of a particular grammar point. Then, the teacher draws the pupils' attention to the frequent errors made in acquiring such structure through informing them about the negative interference of their L1, after that, having the learners apply what they have learned through structured input including many examples of the target structure. This way seems to be helpful in grammar learning.

4.7.   Conclusion

This chapter provided current information about how teachers can make instructional decisions through making use of data obtained from diagnostic assessments to support and better the quality of grammar teaching and learning. It emphasized the necessity of effective grammar teaching as effective decision making through shedding light first on some general concepts that involve its definition, its relation with student learning and its dimensions focusing on instructional effectiveness. It highlighted the concept of using assessment data to drive instruction and improve students' learning through highlighting the significance of diagnostic assessment to effective instruction. It also presented the necessary stages of educational decision process. Effective teaching of grammar is based on the teachers' ability of making the best decisions of instructional grammar delivery concerning the content and processes to teach and how best teach that content in the most efficient and successful ways. Hence, this chapter offered teachers first a framework of things to be considered before and when making decisions about grammar teaching and then a framework of how teachers can make best decisions of grammar instruction through adapting their teaching strategies, methods, and skills and other classroom techniques. These decisions also concern providing special instruction for special learners as learners are different in terms of strengths, weaknesses, interests and grammar learning strategies. In view of that, chapter four provided the basis for group instruction as well as individualized instruction.

As the case study concerned their difficulties in learning wh-questions in English, chapter four proposed some perceptions and strategies about the ways in which forming *wh*-questions should be taught and assessed at this level and which grammar points should be

emphasized before. It also tried to give teachers an idea of how to deal with the grammatical errors in general and in such grammar point in particular.

GENERAL CONCLUSION

Grammar teaching and testing have been one of the most controversial aspects of language teaching and testing for a long time. The teachers' role is to help their learners appreciate and use grammar accurately and appropriately since grammar is the core constituent of learning any language. The chief goal of grammar instruction is to instill in learners a positive attitude toward its learning and to support their grammar competence growth. Achieving such goals is not easy since the majority of learners experience considerable difficulties which lead them to find learning grammar difficult and undesirable. They confuse between concepts, overgeneralize rules and make different types of errors. Those learners need to be given a special help but in the appropriate and most efficient way. This assistance to be efficient should be based on a systematic frame of action which should be useful and practicable to provide the appropriate and necessary instructional support. One of the contemporary issues concerning that is making supporting instructional decisions based on assessment data, making a great emphasis on diagnostic assessment. In view of that, the goal of this research work is to provide current information about how data obtained from diagnostic assessment can be a support to instructional decisions making to improve the quality of grammar teaching and learning. This can be through three fundamental stages; starting with diagnostic assessment, then analyzing the data obtained from this assessment and finally making use of these data to make effective decisions and improve instruction.

The first part of the work has provided an understanding of how teachers should diagnose their students' grammar weaknesses and difficulties in an attempt to answer the first concern of this dissertation: "How should teachers design and implement efficient diagnostic grammar tests?". A diagnostic grammar test can be efficient only if it can determine clearly areas of strengths and weaknesses for individual students in the target point. Thus, as any test, diagnostic grammar tests should be characterized by special features that make them efficient and useful to achieve the purpose they are intended for. First of all, teachers should determine the construct wanted to be measured before starting constructing a test. They should define clearly what they want to learn from the assessment results. Depending on that, they should find a clear link between the teaching objectives and the test. In other words, planning a good grammar diagnostic test should be based on the definition of abilities that are intended to be measured and how these abilities can be reflected in the test items. This clear definition is

very important for the validity of any test. The correct choice of precise items, questions and examples provides satisfactory data in terms of quantity and quality.

In addition to construct validity mentioned above, reliability which refers to both accuracy and consistency in test results is a crucial feature of a good diagnostic grammar test. If the test is corrected by another teacher the results would be the same. Objectivity is an essential characteristic of a satisfactory diagnosis. This can be through tests which are easy to administer, score and interpret. Preparing the scoring key and the marking scheme before administering the test has a major role in quickening the correction process and thereby increasing the objectivity of the test. These facilities make the test practicable too. Another feature of practicality is the ease in interpreting its results for the appropriate remedial work. Moreover, the test should be qualified as *interactive* to draw the learners' grammatical ability and not other abilities. The next quality of a good diagnostic grammar test deals with the influence that it has on learners and the whole teaching learning situations through the decisions undertaken based on the interpretations of the test results. Good tests have a positive washback that can be observed through the learners' attitudes and actions as well as their learning progress. This may appear in the change that has occurred in the learners' level as a result of the under-taken decisions. Any satisfactory diagnosis must be appropriate to the programme. Moreover, a diagnosis that defines a very general area is less useful than one that challenges errors more precisely. Another significant feature is exactness. Diagnostic tests that give vague results do not achieve the intended purposes they are designed for. Besides, clarity is an essential feature of test effectiveness. The teacher should formulate the question carefully, use simple and direct language and avoid unnecessary words. An effective diagnostic grammar test should be based on content from the curriculum and what is necessary for it to reveal an individual's weaknesses and difficulties in a certain course of grammatical ability. Its items and questions should really reflect the learners' abilities and pinpoint errors. Moreover, they should provide information on the causes behind making such errors and the factors leading to such difficulties.

Concerning the types of items appropriate for diagnostic purpose, it appears that short answer questions are suitable. And these types can be selected-response tasks or limited-production tasks. Selected-response tasks require examinees to select the correct answer from two or more words or sentences. Limited-production tasks require test-takers to construct responses which may be in a form of a word or sentence. These types of tasks require

responses in a controlled manner and their results provide information about pupils' explicit knowledge of grammatical forms. Thus, they are the most appropriate tasks in this way. These are some examples: 'gap-filling tasks, multiple-choice (MC) tasks, error identification, matching tasks, discrimination tasks, noticing tasks, grammaticality-judgment tasks', or as limited-production tasks 'gap-filling tasks with their own words, answer tasks, dialogue (or discourse) completion task (DCT), information- transfer tasks, sentence transformation, word formation tasks, error identification and correction tasks and dictation tasks'. The questions should be related to the learning points and identify efficiently the learners' weaknesses in those points.

Teachers in constructing effective diagnostic grammar test go through a systematic diagnosis process. These stages are planning, writing items, assembling the test, providing directions, providing the scoring key and marking scheme and finally reviewing the test. First, the teacher should identify the grammar areas that present difficulties, the pre-requisite knowledge necessary for learning the new grammar points, taking decisions about the scoring key and the method of interpreting the results and deciding about the types and numbers of tasks that really reflect the learners' grammatical abilities. The second step is writing items. The diagnostic grammar test is a set of items prepared depending on a detailed analysis of the grammar points wanted to be measured and depending also on the essential grammar pre-requisites which are necessary for learning the new points. Third, the teacher should choose the suitable items that best serves in achieving the test purposes. Along with the writing of the items, instructions, scoring key, marking scheme and model answers should be prepared carefully. They should be clear, understandable and precise. The last stage is reviewing the test before administering it with learners. This is for the purpose of identifying any errors or unclear instructions.

The second part of this work has offered a systematic framework of how data obtained from diagnostic grammar tests should be examined and interpreted so as to effectively identify areas of strengths and weaknesses for individual students in an attempt to answer the second question of this dissertation: 'How should data obtained from these tests be examined and interpreted?'. This systematic framework involves the use of error analysis approach to provide more informative and diagnostic results. This approach was applied on the acquisition of the *wh*-questions as a case study for this research work for the purpose of finding out the

difficulties of asking *wh*-questions in English and their potential sources among those learners.

The designed test, which was a discrete item test, consisted of just one task. It was a limited-production task which required the test-takers to construct 23 *wh*-questions based on underlined words. It was based on the most important grammar elements that underline the basic knowledge of asking *wh*-questions; *wh*-word and internal structures. The test papers constituted the research corpus. After, they were being corrected, the errors that the learners committed were identified, categorized and explained for the purpose of finding out the most frequent errors and the reasons behind making them; which means that quantitative and qualitative analyses were followed for all the questions forms produced by the samples in a total of 460 questions.

For analyzing the errors made by the learners, the description of errors included the identification and categorization of errors under particular categories and a quantification of each type. In the linguistic description of errors followed in this work, four broad categories were suggested; omissions, additions, misformation and misordering. Depending on these taxonomies, errors can be categorized as errors of *omission* for the absence of necessary items that must appear in a well-formed utterance, errors of *addition* for adding items that must not appear in a well-constructed utterance, *misformation* for incorrect forms of morpheme or structure, *misordering* for the wrong order of the elements of an utterance and M*isselection errors* for the wrong selection of items.

Three analyses were conducted on the data. In the first analysis, all the questions were coded as either correct or incorrect in terms of word order, verbal and auxiliary morphology and the presence of the necessary lexical items (as *wh*-words, subject, etc.). In the second analysis and to get deeper insights on the most difficult forms encountered by those learners in questions construction, we analyzed the three types of questions; correct, incorrect and avoided ones into categories depending on the types of *wh*- questions forms. The third analysis concerns coding errors; the errors in the incorrect questions were coded into five categories depending on the surface strategy taxonomies of errors presented above.

The findings obtained from the diagnostic grammar test revealed the forms that presented more difficulty and the most common grammatical errors committed by the target pupils in each type and their possible sources.

The analysis of the learners' marks indicated that those learners' competence to construct *wh-* questions was very weak. The total number of the marks below the passmark represented nineteen (19) out of (20), representing a percentage of **95%.** This low level was confirmed also when calculating **the mean of the test results that was (4.8).** Besides, the researcher set intervals as criteria for evaluating the learners' competencies in *wh*-questions construction to interpret the frequency of the correct and incorrect responses as well as the absent ones in each question. Depending on what was found, the proficiency of these learners in formulating *wh*-questions did not reach the passmark rate which was at least 10 correct questions for each. On the contrary, it was very weak. The findings of the study revealed that out of the 460 questions only 36 were fully correct, while the gaps remaining without answers were considered as wrong answers due to the lack of knowledge or carelessness. The percentage of the correct answers was **(7.82 %);** a surprisingly very weak rate. On the light of these results almost all of the learners found it difficult to form grammatically correct questions in English.

Nineteen participants got less than the passmark and just one pupil had 11.25 points out of 20. The twenty-three questions instrument yielded 903 errors made by all the participants; (21) errors were made by the exceptional pupil who got 11.25 points out of 20 and the rest of the errors (882) were committed by the rest of the learners. The analysis of this pupil responses indicated that she had a problem with the right question word and the form used to ask about possession. She found difficulties with questions containing the auxiliary 'to be'. In Questions with 'do' support, her great problem was in the irregular verbs. Hence, the remedial instruction proposed for her was based on auxiliaries 'to be' and 'to have' in forming complex tenses and the irregular verbs. The most difficult forms of questions among the rest of the learners were *wh*-questions without inversion using 'whose' and Questions with (*What + a form of do?*) used to ask questions about ***activities.*** The next most difficult forms of questions found in this study were *wh*-questions that need do-support and *wh*-questions with inversion mainly questions that contained an auxiliary verb 'to have' and modal verbs. They had also a problem in supplying the right interrogative words, namely 'which', 'how ', 'how long ago', 'how often', 'how many', 'whose' and 'whom', even 'what' that was normally easy for learners.

Concerning errors, they made different and many types of errors. However, we attempted to focus on the most common ones. Regarding Questions with (What + a form of

do?), they appeared to be the omission of the operator 'do', keeping the main verb instead of inserting 'to do' in the right form and the total omission of the main verb. Even if they used the auxiliary 'to do', they found difficulties to put it in the correct tense form and they did not invert it with the subject. The analysis of their answers in questions with 'do' support revealed that the majority of learners had problems in the use of English tenses, verbs and auxiliaries, and their inability to distinguish between regular and irregular verbs. However, in wrong questions with inversion, errors of subject-auxiliary inversion were the most frequent. Other types of errors occurred in their questions such as the unnecessary addition of words mainly the underlined words intended for the questions, 'be' and 'do' redundancy, ill-formed questions, subject omission and replacing 'be' with 'do' and vice versa.

The analysis of the findings revealed that the errors made by those learners were both from interlingual and intralingual interference. However, most of them were due to intralingual factors. Those caused by L1 interference were in a small proportion compared with those resulted because of the influence of English language. More precisely, most of them were caused by overgeneralization and the total ignorance of rules. Their failure to select the right interrogative words is attributed to their poor knowledge of interrogative words or their inability to understand the sentences because of the difficulty of words or their weak level. However, the absence of inversion of the auxiliary and the subject is considered as incomplete application of the rule in the target language. Their problems in misusing tenses, auxiliaries and verb forms were caused by intralingual factors. Those errors were caused by overgeneralization or incomplete application of rules. Concerning L1 interference, we can say that Arab learners' difficulty with the interrogative construction is compound by the fact that Arabic language does not have auxiliaries, and this can be touched in their omission of the operator. Misplacement of verb in question forms (the verb precedes the subject) are examples of Arabic interference. Besides, it has just three basic tenses past, present and future, unlike English which has many. These may be causes of their failure to include the appropriate form of the operator and predicator.

The third part of this work has provided some perceptions of how teachers can make use of data obtained from diagnostic assessments to make effective instructional decisions and thereby support and advance pupils' grammar learning in an attempt to answer the last question of this dissertation: "How can teachers build instruction based on these data so that they can better the quality of grammar teaching and learning?". Depending on the diagnostic

test results, some instructional decisions can be made concerning different sides. But it is the teacher who is in charge of diagnosis, error analysis, decision- making and its execution. Teachers, to be able to succeed in doing so, are strongly required to be trained. It is necessary to be able to make effective instructional decisions as a key component of effective teaching. Teachers who can make effective decisions concerning different educational situations are the teachers who can make a great and positive impact on their students' achievement.

Effective teaching of grammar is based on the teachers' ability of making the best decisions of instructional grammar delivery concerning the content and processes to teach and how best organize and deliver that content in the most efficient and successful ways. They have to understand the levels associated with instructional decision making and make best choices from the alternatives available. In doing so, they should take into consideration the desired learning outcomes, the appropriate teaching style, the lesson content and its process, and their learners' needs. They can easily shape their use of specific instructional practices and make alternative decisions for better instruction delivery depending on current situations and data. They keep using what is successful and change what is not. They can know what they can go through quickly and what needs more focused instruction. They should adapt their teaching models, strategies, methods, and skills and other classroom techniques to help all students in the classroom achieve their academic potential.

Most of classes involve pupils of different levels of ability and different learning styles. The results of diagnosis can identify different areas of difficulties. Depending on that, remedial measures can be taken through group instruction. Hence, it provides the basis for individualized instruction, use a variety of teaching approaches, differentiated teaching methods, differentiated assignments and so on.

To overcome their difficulties in learning English *wh*-questions some perceptions are proposed concerning grammar instruction. Teachers can explore them to foster the learners' grammatical ability. Preemptive targeting of errors that means directing the students' attention to the possible errors that they may commit in advance helps them to avoid making errors. Moreover, teaching its structures in gradual sequences and addressing the kinds of errors that occur in each stage can be beneficial to make learners avoid committing errors. Depending on the obtained data concerning the most committed grammatical errors, teachers can know which grammar points to focus on before and when teaching *wh*-questions to EFL learners

and how to sequence grammar instruction in general. It is beneficial to teach turning sentences into the negative form and foster their knowledge of verbs and auxiliaries forms and tenses. before teaching them forming *wh*-questions.

This research work provided an overall framework from which teachers can design and implement efficient diagnostic grammar tests, analyze them in a systematic way and accordingly make instructional decisions that can better the quality of grammar teaching and learning. The findings provided responses to the questions raised by this research validating the proposed hypotheses. However, a great deal of research work is needed to be done in this area to deal with more linguistic aspects that were not mentioned in this study and to suggest more recommendations and techniques to deal with the issue.

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APPENDICES

Appendix *A*

The Diagnostic

Grammar Test

| A diagnostic grammar test |

Task 1: Ask questions on the underlined words

1- Kareen went to the United States of America **three years ago**.
…………………………………………………………………..

2- Hong Kong reverted to China **in 1997**.
………………………………………………………………………

3- She has been in **London** since she was a child.
…………………………………………………………….

4- It is forbidden to kill whales **because they are in danger of extinction.**
…………………………………………………………..

5- **James** answered all the questions correctly.
…………………………………………………………….

6- **George's** mother is Russian.
…………………………………………………

7- He is studying **architecture**.
………………………………………….

8- **Respect** is important.
……………………………

9- My parents feel **tired** after work
…………………………………………….

10- The girls **watch a Turkish serial**.
……………………………………………….

Task 1: Ask questions on the underlined words

11- Lila likes to wear **the green jacket**, not **the black** one.

………………………………………………….

12- My father met **the headmaster** yesterday.

………………………………………………….

13- Helen has read **ten** books.

…………………………………………..

14- Children brush their teeth **twice a day**.

……………………………………………………

15- The football team **had won the match** several times.

…………………………………………………..

16- He **was painting a nice picture.**

....

17- People **should respect each other**

……………………………………………….

18- George's grandfather was **strong**.

……………………………………………….

19- This girl **sells newspapers** there.

……………………………………………….

20- People should protect **the environment**

……………………………………………….

21- Child labour means **work for children that harms or exploits them** .

………………………………………………………………………………….

22- Violence is found **in schools , institutions , on the streets and in the workplace**

…………………………………………………………………………………..

23- Arabs **conquered many rich provinces**.

………………………………………………………………………………….

Appendix B

The Exceptional Pupil's Test Papers

A diagnostic grammar test

M ²⁵/₁/20

Task 1: Ask questions on the underlined words

1- Kareen went to the United States of America **three years ago**.

Since when Kareen went to USA ?

2- Hong Kong reverted to China **in 1997**.

When did Hong Kong revert to China ?

3- She has been in **London** since she was a child.

Where She has been , since She was a Child ?

4- It is forbidden to kill whales **because they are in danger of extinction.**

Why it is forbidden to Kill whales ?

5- **James** answered all the questions correctly.

Who answered all the question ?

6- **George's** mother is Russian.

Whose mother is Russian .

7- He is studying **architecture**.

What he is Studying ?

8- **Respect** is important.

What is important ?

9- My parents feel **tired** after work

What did your parents feel after work ?

10- The girls **watch a Turkish serial**.

What does She do ?

11- Lila likes to wear **the green jacket**, not **the black** one.
...What...does...Lila...like...to...wear...and what she does'nt ?

12- My father met **the headmaster** yesterday.
...Who...met...your...father...yesterday.

13- Helen has read **ten** books.
Has
...How...many...books...? Helen read ?

14- Children brush their teeth **twice a day**.
...How...many...time...do...they brush their teeth ?.

15- The football team **had won the match** several times.
...What...had...the...football...team...done...several...time ?

16- He **was painting a nice picture**.
...What...was...he...doing...?

17- People **should respect each other**
...What...Should...people...do.?

18- George's grandfather was **strong**.
...How it...was...George's...grodfather?

19- This girl **sells newspapers** there.
...What...does this girl...do there ?

20- People should protect **the environment**
...What...Should...people...protect..?.

21- Child labour means **work for children that harms or exploits them** .
...what...does child labour...mean?...

22- Violence is found **in schools , institutions , on the streets and in the workplace**
...Where...is...the...violence...found...?...

23- Arabs **conquered many rich provinces**.
...what...did...arabs...do...?

Appendix C

A Sample of the Pupils' Test Papers

Task 1: Ask questions on the underlined words

1- Kareen went to the United States of America **three years ago**.

How did Kareen go to the united states of america ?

2- Hong Kong reverted to China **in 1997**.

...when Hong Kong reverted...?.......................

3- She has been in **London** since she was a child.

...where is since of a child.?... ...0ub.

4- It is forbidden to kill whales **because they are in danger of extinction.**

...why forbidden to kill...whales ?

5- **James** answered all the questions correctly.

...what answered all the questions correctly?

6- **George's** mother is Russian.

....How... mother... is Russian ?

7- He is studying **architecture**.

...what is studying..?..

8- **Respect** is important.

..what is... important ?

9- My parents feel **tired** after work

...when my parents... feel tired ?

10- The girls **watch a Turkish serial**.

...what she is the girls ?......

ill-formed

11- Lila likes to wear **the green jacket**, not **the black** one.

..what is like to wear?..........
□ Subject   amb

12- My father met **the headmaster** yesterday.

..when your father mets...?

13- Helen has read **ten** books.

..How has read the books? amb

14- Children brush their teeth **twice a day**.

....

15- The football team **had won the match** several times.

..what is the football team.?

16- He **was painting a nice picture.**

.....what she do........?

17- People **should respect each other**

...what are the people do?

18- George's grandfather was **strong**.

....

19- This girl **sells newspapers** there.

..where a his girls there?

20- People should protect **the environment**

....

21- Child labour means **work for children that harms or exploits them**.

....what child labour means?..........

22- Violence is found **in schools , institutions , on the streets and in the workplace**

....

23- Arabs **conquered many rich provinces**.

....

Task 1: Ask questions on the underlined words

1- Kareen went to the United States of America **three years ago**.

....

2- Hong Kong reverted to China **in 1997**.

....

of

3- She has been in **London** since she was a child.

Where is She since she was a child

4- It is forbidden to kill whales **because they are in danger of extinction.**

on *Why Forbidden Kill Whales?* لأن هذا النوع مهدد بالانقراض

5- **James** answered all the questions correctly.

....

6- **George's** mother is Russian.

....

025 7- He is studying **architecture**.

What is studying He ?

8- **Respect** is important.

Respect it is important? ill-formed.

9- My parents feel **tired** after work

....

10- The girls **watch a Turkish serial**.

What watch the girls?
or

11- Lila likes to wear **the green jacket**, not **the black** one.

Lila likesto wear the green jacket or the black jacket?

12- My father met **the headmaster** yesterday.

....

13- Helen has read **ten** books.

....

14- Children brush their teeth **twice a day**.

....

15- The football team **had won the match** several times.

....

16- He **was painting a nice picture.**

....

17- People **should respect each other**

....

18- George's grandfather was **strong**.

How was george's grandfather?

19- This girl **sells newspapers** there.

What sells This girl there?

20- People should protect **the environment**

What shold peole protect?

21- Child labour means **work for children that harms or exploits them** .

....

22- Violence is found **in schools , institutions , on the streets and in the workplace**

Where is found violence?

23- Arabs **conquered many rich provinces**.

....

Task 1: Ask questions on the underlined words

1- Kareen went to the United States of America **three years ago**.
..How..much..the..united..States..of..America..do..? Ambig
α

2- Hong Kong reverted to China **in 1997**.
where yHong..king..reverted..to..china.?.....................
α

3- She has been in **London** since she was a child.
where..was..the..child.?.....Ambi.................
0½

4- It is forbidden to kill whales **because they are in danger of extinction.**
what..is..the forhidden..?...............Ambi!
.

5- **James** answered all the questions correctly.
who..is..answer..all..the..questiony?..........
0½

6- **George's** mother is Russian.
.who is..Russian?......................

7- He is studying **architecture**.
what..he..is..stydying.?..........
0½

8- **Respect** is important.
.what..is..important.?...
0½

9- My parents feel **tired** after work
which..
α

10- The girls **watch a Turkish serial**.
....

11- Lila likes to wear **the green jacket**, not **the black** one.

what Lila likes?

12- My father met **the headmaster** yesterday.

....

13- Helen has read **ten** books.

....

14- Children brush their teeth **twice a day**.

when the children brush their?

15- The football team **had won the match** several times.

....

16- He **was painting a nice picture.**

what do Painting?   Arabi

17- People **should respect each other**

what do people?

18- George's grandfather was **strong**.

....

19- This girl **sells newspapers** there.

....

20- People should protect **the environment**

what the People protect?

21- Child labour means **work for children that harms or exploits them** .

....

22- Violence is found **in schools , institutions , on the streets and in the workplace**

where the violence found?

23- Arabs **conquered many rich provinces**.

what the arabs do?

ملخص:

تحاول الأطروحة الحالية تقديم معلومات حول كيفية فحص البيانات التي تم الحصول عليها من التقويم التشخيصي للتلاميذ في القواعد النحوية، واستخدام هذا الفحص كدعم لاتخاذ القرارات التعليمية لتحسين جودة تعليم وتعلم القواعد واللغة الإنجليزية. يعد تحليل الأخطاء أحد أكثر الطرق المفيدة التي اقترحها العديد من الباحثين لتحليل التقويم التشخيصي. يهدف هذا العمل إلى التحقيق في أكثر الأخطاء شيوعًا والأسباب الحقيقية وراء ارتكابها بغرض اتخاذ قرارات تعليمية فعالة وفقًا لذلك. تقتصر هذه الدراسة على كفاءة صياغة الأسئلة لأنها أحد أهم الجوانب التي يحتاج التلاميذ إتقانها، ولأنها تشكل صعوبة كبيرة بين معظم متعلمي اللغة الإنجليزية كلغة أجنبية .

كلمات مفتاحية:

التشخيص النحوي؛ التقييم التشخيصي؛ تدريس القواعد؛ الصعوبات النحوية؛ الأخطاء النحوية؛ تحليل الأخطاء؛ صياغة الأسئلة؛ اتخاذ القرارات التعليمية.

Résumé :

La présente thèse tente de fournir des informations sur la façon d'examiner les données obtenues à partir de l'évaluation diagnostique de la grammaire des élèves, et d'utiliser cet examen comme support à la prise de décisions éducatives pour améliorer la qualité de l'enseignement et de l'apprentissage de la grammaire et de l'anglais. L'analyse des erreurs est l'une des méthodes les plus utiles qui ont été proposées par de nombreux chercheurs pour l'analyse évaluation diagnostique. Ce travail vise à examiner les erreurs les plus courantes et les raisons réelles qui les sous-tendent dans le but de prendre des décisions éducatives efficaces en conséquence. Cette étude se limite à la compétence à formuler une 'question' car c'est l'un des aspects les plus importants que les élèves doivent maîtriser, et parce qu'elle constitue une grande difficulté chez la plupart des apprenants de l'anglais comme langue étrangère.

Mots-clés :

Diagnostic grammatical ; L'évaluation diagnostique ; Enseignement de la grammaire ; Difficultés grammaticales ; Erreurs grammaticales ; Analyse des erreurs ; Questions 'w h - questions' ; Prise de décisions pédagogiques.

Summary

The present dissertation attempts to provide current information about how data obtained from diagnostic grammar assessments should be examined and used as a support to instructional decisions-making to improve the quality of grammar teaching and learning. One of the most useful approaches that have been proposed for educational diagnostic assessment is error analysis. It aims at investigating the most common errors and the real causes behind committing them for the purpose of making effective instructional decisions accordingly. This study is restricted to forming *wh*-questions as one of the most essential aspects that pupils need to master and because it forms a serious difficulty among most of EFL learners.

Key words:

Grammar diagnosis; Diagnostic assessment; Grammar teaching; Grammar difficulties; Grammatical errors; Error analysis; Wh- questions; Instructional decisions making.