Deanship of Graduate Studies

Al-Quds University

The Inclusion of the 21st Century Skills in English Palestinian Textbooks for the Upper Primary Stage

Naqa' Nasser Mohammad Nassar

M.A. Thesis

Jerusalem – Palestine

1444-2022

The Inclusion of the 21st Century Skills in English Palestinian Textbooks for the Upper Primary Stage

Prepared by

Naqa' Nasser Mohammad Nassar

BA Major English Minor French

Hebron University – Palestine.

Supervisor: Dr. Adnan Shehadeh

This thesis is submitted in partial fulfillment of the requirements for the Degree of Master in Education in Teaching English as a Foreign Language, Faculty of Educational Sciences, Al-Quds University.

1444-2022

Al-Quds University

Deanship of Graduate Studies

Teaching Methods

Thesis Approval

The Inclusion of the 21st Century Skills in English Palestinian Textbooks for the Upper Primary Stage

Prepared by: Naqa' Nasser Mohammad Nassar

Matriculation No. 22011658

Supervisor: Dr. Adnan Shehadeh

Master thesis was submitted and accepted on: 1 / 8 / 2022

The names and signatures of the examining committee members are as follows:

1- Head of committee: Dr. Adnan Shehadeh Signature:

2- Internal Examiner: Dr. Ibrahim M. Arman Signature:

3- External Examiner: Prof. Afif H. Zeidan Signature:

Jerusalem - Palestine

1444-2022

Dedication

To my relatives in heart;

To my relatives in blood; and

To those who are worthy of praise.

Declaration

I certify that this thesis submitted for the Degree of Master in Education in Teaching English as a Foreign Language, is the result of my own research, except where otherwise acknowledged. This thesis (or any part of the same) has not been submitted for a higher degree to any other university or institution.

Signature:

Name: Naqa’ Nasser Mohammad Nassar

Date: 1 / 8 / 2022

Acknowledgement

All praise is due to Allah, who has guided us to this, and we would never have been guided if Allah had not guided us.

I would like to extend my sincere thankfulness to my supervisor, Dr. Adnan Shehadeh whose supervision and valuable guidance played a main role in completing my thesis.

Sincere thanks go to the virtuous Dr. Mohsen Ades for his dedication and great belonging to the message of Education.

My deepest appreciation is extended for Dr. Ghassan Sirhan, Prof. Afif Zaiden, Dr. Ibrahim Arman and Dr. Inas Nasser for their efforts, great cooperation and supportive consultations during my study at Al-Quds University.

Great thanks to all of my colleagues and friends who gave me a lot of their time, encouraged me, and supported me through the whole period of my studies.

Abstract

This study aimed at identifying the skills of the 21st century included in the English textbooks for the upper primary stage in Palestine. It also aimed at checking the gradient of 21st century skills in the *English for Palestine* textbooks. Moreover, it aimed at finding out the sequences of the four English skills representation according to 4Cs' in the *English for Palestine* textbooks. In order to carry out the research, the researcher used the descriptive analytical approach. The researcher developed a content analysis framework consisting of (30) indicators, divided into (4) main aspects (4 Cs'), which are creativity, critical thinking, communication and collaboration. As for the study population, it is the English *for Palestine* textbooks for upper primary stage. The Sample of the study consisted of the English for Palestine textbooks of the 5th, 7th, and 9th primary grades at their both levels for the scholastic year 2021-2022. The results of the study showed a low degree of inclusion of the 21st century skills in *English for Palestine* textbooks. The findings of study demonstrated that skills of communication came at the top with a percentage of 35.98%, while critical thinking occupied the second place with the percentage 30.28%, collaboration obtained the third place with 20.27%; however, creativity occupied the fourth place with 13.45%. Additionally, the results showed that the percentages and frequencies of 4 Cs' are not graded in the content of the 5th, 7th and 9th grades. They also showed that speaking is the most dominant skill in the presentation of the 21st century skill in *English for Palestine* textbooks for upper stage, writing comes in the second place, listening is the third, while reading comes last in the fourth place. The study recommended to the necessity that the Ministry of Education (MoE) should include the 21st century skills in all components of the *English for Palestine* textbooks for the upper basic stage. In addition, teachers should compensate

for the imbalance in the lack of the availability of the 21st century skills through various teaching methods and authentic assessment means. New studies should study the gradient of the 21st century skills in books, and propose ways to develop the integration of these skills into the curriculum.

مهارات القرن الحادي والعشرين المتضمنة في الكتب اللغة الانجليزية للمرحلة الأساسية العليا في فلسطين

إعداد الطالبة: نقاء ناصر محمد نصار

بإشراف الدكتور: عدنان شحادة

الملخص

هدفت هذه الدراسة إلى التعرف على مدى تضمين مهارات القرن الحادي والعشرين في كتب اللغة الإنجليزية المدرسية للمرحلة الأساسية العليا في فلسطين، وتدرج مهارات القرن الحادي والعشرين في كتب اللغة الإنجليزية. إضافة الى معرفة تسلسل مهارات اللغة الإنجليزية الأربعة وفقاً لتمثيلها في الكتب المدرسية.

استخدمت الباحثة المنهج الوصفي التحليلي. وتبنت إطارا لتحليل المحتوى وطورته بما يتناسب مع دراستها حيث تكون من (30) مؤشراً، مقسمة إلى (4)محاور رئيسية، وهي التفكير الإبداعي، والتفكير النقدي، والتواصل، والتعاون.

تألف مجتمع الدراسة من كتب اللغة الإنجليزية المدرسية للمرحلة الأساسية العليا في فلسطين. وتكونت عينة الدراسة من كتب اللغة الإنجليزية المدرسية للصفوف الأساسية الخامس والسابع والتاسع بفصليهما الأول والثاني للعام الدراسي (2022-2021).

أظهرت نتائج الدراسة انخفاضاً في درجة تضمين مهارات القرن الحادي والعشرين في كتب اللغة الإنجليزية المدرسية في فلسطين. وأظهرت نتائج الدراسة أن مهارات الاتصال جاءت في المقدمة بنسبة 37.73%، فيما احتلت مهارة التفكير الناقد المرتبة الثانية بنسبة % 30.08 وحصلت مهارة التعاون على المركز الثالث بنسبة 19.09%. واحتلت مهارة الإبداع المرتبة الأخيرة بنسبة 13.09%. كما أظهرت النتائج أن النسب المئوية والتكرارات غير متدرجة في محتوى الصفوف الخامس والسابع والتاسع الأساسية. و أن مهارة المحادثة هي المهارة الأكثر هيمنة في عرض مهارات القرن الحادي والعشرين في كتب اللغة الإنجليزية للمرحلة الأساسية العليا في فلسطين، والكتابة تأتي في المرتبة الثانية، والاستماع يأتي في المرتبة الثالثة، والقراءة تأتي في المرتبة النهائية.

أوصت الدراسة بأن تدرج وزارة التربية والتعليم مهارات القرن الحادي والعشرين في جميع مكونات كتب اللغة الإنجليزية للمرحلة الأساسية العليا في فلسطين. وضرورة عمل المعلمين على تعويض عدم الاتزان في مهارات القرن الحادي والعشرين المعروضة من خلال طرق التدريس المختلفة ووسائل التقويم الحقيقي. كما توصي الدراسة الدراسات المستقبلية في هذا المجال أن تولي تدرج مهارات القرن الحادي والعشرين في الكتب وطرق تطوير دمج هذه المهارات في المناهج الدراسية أهمية خاصة في البحث العلمي.

Chapter One

Introduction

1.1 Background:

The present changes and its realities of the steady fast development in various fields require specialists, academics and researchers in the educational field. This may necessitate paying special attention to draw plans and prepare effective educational programs, prepare students to cope with the accelerating scientific and technological challenges by providing them with the skills, experiences and knowledge. These issues are considered as key to enable them to succeed in their present and future life. Building and developing curricula in general, as well as the English curricula in particular is possibly the most effective way to achieve this. (Al-Mughrabi, 2021)

Palestinian students, like all other basic and secondary school students around the world, are in need to be involved and to contribute to an increasingly interdependent community of nations in the 21st century. In order to achieve their personal, social and long-term professional goals, individuals must be able to communicate skillfully, appropriately and effectively with others. They have to be able to cooperate with others and be part of a team to represent themselves later in the society. They should evaluate the various cases and give their judges effectively. Moreover, they ought to think creatively and come up with unique, authentic solutions to be part of modernity, for the world is full of basic copies.

The challenge that faces contemporary education is the preparation of all students to live in this new world. This is because we face several changes in the world that force educational system to be a part of it. These changes include, for example universal quality standards which imposed school systems to change their performance, increase their productivity and raise their effectiveness to respond the quality requirements and standards. Moreover, changes and developments in the ICT have forced schools to make fundamental changes to the educational process. Schools are now required to prepare students for the practical life

in a changing world, where there have been radical changes in the field of production of data and work systems that depend on knowledge to master a comprehensive range of professional, practical and scalable qualifications and keep pace with scientific and technological changes and developments. One of the most important characteristics of the contemporary societies is the high rates of rapid change that occurred in all aspects of life, such as the social, economic, intellectual, scientific and technological spheres. This speedy change has forced schools to play new roles and perform tasks and functions, to enable students to adjust to the rhythm of this change, change and help them develop mechanisms of thinking, analysis and evaluation, to interact with the new reality, and to understand the world and its different new phenomena. In addition, schools are now required to prepare students to live in a competitive world, governed by standards of quality, mastery, excellence, discrimination, creativity and innovation.

If education is to be effective in the 21st century, then students need hands-on chances to learn about the cultural diversity around them and to study foreign languages. In order to strengthen this issue, we need to enlighten their minds with all that makes them influential and leave their own mark. Curriculum textbooks must be prepared in a way that makes it like an open encyclopedia to various civilizations. Cross-cultural competence can be fostered by meaningful and sustained interactions with others who have different world views, life experiences, languages, and cultures. In turn, this encourages students to develop local and global awareness and helps them to better comprehend the concept of receiving education in the 21st century. (General Administration of Curricula, 2015)

Universally, there are many discussions regarding the significance of learning the skills and practices of the twenty-first century. In fact, this goes beyond learning the traditional content to include cross-cutting skills in various disciplines, such as problem solving and information literacy. In addition, there are many soft skills, like collaboration. Needless to say, the standards of the 21st century skills appear to necessitate inquiry-oriented learning strategies. It combines these new criteria for learning with supporting pedagogies and technologies that are so timely. Chu et al (2017).

The term "21st century skills" refers to the information, abilities, and characteristics that are crucial for students to succeed in the modern world, particularly when students move from high school to college, and then to the labor market. At this age, 21st century skills have a

unique importance as students form the characteristic of their identity. They have to become familiar with all aspects of development and creativity that improve their personality and help them communicate effectively, use technological tools, and acquire the ability to face challenges. As a result, students will be prepared to face the challenging modern life.

Despite the great improvements in curricula around the world, there is still an urgent need to develop them, to emphasize the diversity, development and depth that encompass the various dimensions of education from knowledge that commensurate with the massive cognitive decimal explosion. In addition, there is a need to develop the supra-cognitive capabilities that develop creativity, critical thinking, and generous skills, to focus on the practical dimension besides the theoretical dimension of the curriculum to enable them to adapt with the requirements of the 21st century.

The degree of accuracy with which students are expected to produce a language must be specified in the foreign language curriculum. This means that students must be able to explain received messages and produce them in a way that reflects their accuracy in being a part of the sociocultural context, the listener's acceptability of the message, and the planning and clarity of the student's communication. Our curriculum's stated notion of learning considers students as proactive people who can keep an eye on and manage their cognitive activity. Through absorption and integration with earlier knowledge, students would have acquired new information.

Additionally, the *English for Palestine* curriculum supports the new fundamental academic and success skills required for the 21st Century to satisfy the constantly changing needs of our times and to produce independent learners. English curriculum supports and complements what eventually shapes the learner's character. The *English for Palestine* curriculum also intends to assist students in analyzing, clarifying, evaluating, and acquiring values of civil society in the following areas: global and environmental concern, and social responsibility. It is divided into three stages: the lower primary stage (Grades 1-4), the upper primary stage (Grades 5-10), and the secondary stage (Grades 11–12). It aims at contributing to an increasingly interdependent community of nations in the 21st century by creating skilled, effective communicators by achieving their personal, social, and long-term job goals. The task of modern education is to adequately prepare all students to live in this new world. The integration of the 21st century skills into the curriculum has a major impact in various areas of life, for it is considered as a complete and an integrated system that creates a conscious and aware learner of the system of economic, political, social and cultural life.

The Partnership for the 21st Century Skills was responsible for creating this well-known framework (P21). The framework combines topic knowledge, particular skills, expertise, and literacies to describe the knowledge, abilities. Students must master these skills to excel in the workplace and in life. P21 contends that acquiring fundamental academic topic knowledge serves as the "base" of the 21st century learning process, and that schools must build upon this foundation by teaching students additional skills, such as those concerned with learning, life, and literacy. Learning skills, also known as the "Four Cs" of 21st century learning, includes critical thinking, communication, collaboration, and creativity which have been covered in this study. Life skills cover the terms of flexibility, initiative, social skills, productivity, and leadership. In the same context, literacy skills cover the terms of information literacy, media literacy, and technology literacy. (Buckle, 2022)

In light of the previous review, and based on the 21st century skills, and due to the accelerated flow of knowledge, the researcher realizes the urgent need to develop the Palestinian English curriculum for this stage so that students grow up possessing all skills to be effective members in the society, capable of creating, innovating, and solving problems. Future and assumed responsibilities, meet the challenges imposed by the times, and the positive interaction with life in proportion to the age and educational stage and the need to integrate it into the school curricula.

1.2 Statement of the problem:

Based on the main principle of any curricula that aims at matching students' needs with the developments of the current era, and based on the researcher's work as a teacher, there are several shortcomings in the tasks of the *English for Palestine* textbook that prevent its primary role of creating an active generation in society. Therefore, the researcher decided to analyze the textbooks with the aim of identifying the representation of the 21st century skills in the English *for Palestine* textbooks through studying the design of the textbooks in accordance with the 4 Cs'.

1.3 Objectives of the study:

This study was designed to investigate the following:

1. The inclusion of the 21st century skills in the English Palestinian textbooks for the upper primary stage.
2. The gradient 4Cs' (creativity, critical thinking, communication and collaboration) skills according to the textbook level.

3. The representation of the four English skills (Listening, speaking, reading and writing) in the *English for Palestine* textbooks according to 4Cs'.
4. The differences between the frequencies of the 21st century skills according to the grade (5th, 7th and 9th).

1.4 Research Questions:

This research aims at finding answers to the following questions:

The First Question: What are the frequencies of the 21st century skills in the English Palestinian textbooks for the upper pramirey stage?

The Second Question: Are the frequencies of the 21st century skills graded according to the textbook level?

The Third Question: Is there a balance in terms of the frequency of the different 21st century skills included in the four English language skills (listening, speaking, reading and writing)?

The Fourth Question: Are there differences between the frequencies of the 21st century skills according to the grade (5th, 7th and 9th)?

1.5 Null Hypothesis:

The reasearcher converted the fourth question into a null hypothesis which is

" There are no statistically significant differences at the indication level ($\alpha \leq 0.05$) between frequencies' average of 21st century skills according to the grade (5th, 7th and 9th)."

1.6 Significance of the study:

On the theoretical aspect, this study provides the researchers with a content analysis framework to analyze their textbooks according to the 21st century skills. It also develops teachers' methodologies through addressing the weaknesses shown in the curriculum, and by showing results and ratios of the availability of the 21st century skills. Therefore, teachers develop their instruments and procedures, focus on qualified by using enrichment activities, projects, and tasks. They may also verify strategies to enhance their students' abilities.

On the practical aspect, this study is a response to the universal directions of Education to determine the quality of the Palestinian curriculum and the level of teaching by identifying the inclusion of 21st century skills in the *English for Palestine* textbooks. Particularly, we need to be part of the universal educational process. The best way is to adopt a specific teaching approach and educational materials to provide learners with basic effective knowledge and allow them to practice educational experience.

Moreover, to the best of the researcher's knowledge, this is the first study to research the 21st century skills in textbooks and the representation of four English skills according to the 4Cs'. This research will also broaden the scope for future investigations into other aspects and elements of the English for Palestine curriculum that were not previously examined.

1.7 Limitations of the study:

1. This study was restricted to the English for Palestine textbooks for the (5th, 7th, and 9th)) grades.
2. It has been carried out during the scholastic year (2021-2022).
3. The main aspects of the study include: the specific set of the 21st century skills (4 C's) which are creativity, critical thinking, communication and collaboration.

1.8 Definitions of terms:

21st Century Skills: According to the (Glossary of Reform), the term "21st Century Skills" refers to a wide range of knowledge, skills, work habits, and character traits that are thought to be crucial for the success in today's world, especially in collegiate programs and modern careers and workplaces, by educators, school reformers, college professors, employers, and others. In general, students' whole lives can benefit from developing 21st century abilities in all academic fields, educational, professional, and civic contexts. However, for the purpose of this study, they are the four C's (*communication skills, critical thinking, collaboration and creativity*).

Creativity: It is the capacity to analyze and synthesize ideas, and innovative and divergent thinking, come to the fore on two levels (UNICF, 2017).

The purpose of this study is to employ a variety of ideas' generation approaches, develop original and valuable thoughts, receive new ideas, analyze, and assess concepts to enhance and maximize creative efforts.

Critical thinking: Based on what Paul and Elder it entails effective communication and problem solving abilities and a commitment to overcome our native egocentrism and sociocentrism.

As for this study, it is the ability of applying different methods of reasoning depending on the circumstances, examining how components of complicated systems interact with one another to achieve overall results, analyzing and evaluating arguments, statements, and beliefs with effectiveness.

Communication: It is our ability to create and sustain our social world that depends largely on how well we contact. People's social skills are crucial to their well-being – individually and collectively. (Hargie, 2019).

For the purpose of this study, it is the way of expressing ideas and thoughts effectively in a range of situations and formats by using oral, writing, and nonverbal communication abilities.

Collaboration: It is the teamwork to achieve common goals, collaboration in the workplace; in addition to respect for others (UNICF, 2017).

As for the purpose of this study, it is used to exhibit the capacity to collaborate respectfully and productively with various teams and to be adaptable and helpful when making necessary concessions to achieve a shared objective.

Palestinian Textbooks: The English curriculum published by the Palestinian Ministry of Education and Higher Education in August 2003.

Upper-Primary Stage: From the 5^{th} to 10^{th} levels of the basic stage according to the Palestinian Educational System.

Chapter two

Theoretical Background

This chapter covers two sections. The first presents a theoretical background of the corresponding literature that covers the necessary questions related to twenty-first century skills. As for the second, it addresses the empirical studies related to the current study.

2.1 Introduction

Since ancient ages, human beings have been the subject of education and its first target. As a human science, curriculum is the educational framework where the results of scientific research, human studies and human wisdom are produced.

Over the course of its long history, the curriculum has undergone numerous changes regarding what students should learn and achieve. Sometimes, we find out that these curricula are targeting minds to fill them with knowledge; on the other hand, they are targeting minds to learn about the processes that these minds are doing and the opportunities they have for their development and efficiency. Differently, we find out that these curricula are targeting minds to fill them with facts and information. Learners are taught about the stages and traits of each stage so that they can be assisted in their mental, physical, and emotional growth. In turn, they may assist themselves to go on with their own lives without difficulty or disturbance. In order to demonstrate and expand the learner's creative potential and inventive energy, they may also investigate and innovative energies to show and develop them through certain programs

The researcher believes that the significance of authentic and creative teaching springs from the fact that it enables students to solve real-world problems using the knowledge they acquire. Even though teachers play such a great role in elevating their students' performance, curricula can also enhance or impede students who can definitely have common interests. Certainly, teaching curricula requires instructors to apply suitable pedagogical methods and

to teach beneficial skills depending on the content offered. In this sense, teaching can never be regarded as a successful process unless it enables pupils to gain the skills they need to solve real life problems. To do so, the 21st century skills are supposed to be applied in teaching not only to encounter current problems, but also to prepare students for the future.

2.1.1 Learning Theories

The ability to collaborate, solve complex problems creatively and critically, foster the spirit of inquiry, develop technological literacy, engage in multidisciplinary learning, and instill educational agency and flexibility in each student are all skills that educators must deliberately develop to produce effective learners for the 21st century. This can be achieved by designing meaningful and applicable learning activities. Based on their distinct interests, expertise, and talents, teachers should provide students with a voice and a choice in their education. The problems of future that will be vastly different from the present ones can be met and conquered by students who have mastered these abilities and dispositions. Teachers must be well-informed about the learning theory that underpins the 21st century methods so that they can transfer this knowledge to their students. The way students absorb, interpret, and apply educational learning theory is also described in this research. The educational learning theory explains how knowledge is received, processed, and retained by students while they are learning. The four main philosophies of educational learning are constructivism, behaviorism, cognitivism, and humanism.

Constructivism

Lev Vygotsky, Ernst von Glaser Feld, Jean Piaget, and Jerome Bruner have all contributed to constructivism. It is a method that emphasizes the role of the learner and proposes that students actively "build" their knowledge. Each person's reality is shaped by their past experiences, beliefs, and knowledge. Each student's learning is distinct to them since it is based on personal experiences. Alternatively stated, "Constructivist methods stress learners actively by developing their own knowledge rather than passively by accepting information supplied to them from professors and textbooks. (Hinton, 2021)

Bohlin et al (2009) examined cognitive development; they defined it as the process of building knowledge by choosing and arranging it using different mental capacities. They also clarified the Piagetian and the Vygoteskian theories regarding constructivism. Starting with Piaget's theory, they explained that Piaget regards constructivism as an individual process through which a person builds knowledge by employing cognitive skills in different

experiences. Most importantly, Piaget saw that constructivism is a result of interaction between nature and nurture, and it is mainly influenced by age, and it has four main stages:

1- Sensorimotor stage: It is the world exploration that depends on sensory and motor actions and interactions. Infants cannot recognize that they are inseparable from other objects and individuals
.
2- Pre-operational stage: It is the employment of signs and symbols to represent objects. Children develop concepts, but their thinking can be described as one-way thinking with remarkable concentration. However, they seem egocentric; they can only see the world from their perspectives. Thus, they show egocentric speech without caring about the listeners' interests. Additionally, they start to recognize that objects remain the same even if their shapes have changed.
3- Concrete operational stage: children thinking starts to be two-way, and they start to develop logical and reasoning thinking. However, they are not able to evaluate abstract operations
4- Formal operation stage: children are able to solve logical problems, and they develop concepts for morality and wisdom.

Bohlin et al (2009) also clarified how constructivism is impacted by several factors from Piagetian perspective including:

1- Biological maturation: It is a person's readiness to explore, learn, and benefit from the surrounded social experience
2- Positive exploration: It is an individual's interaction with the environment to discover it
3- Social experiences: Social interactions, especially with peers, lead to construct solutions and lead to better usage of logic.
4- Equilibration: individuals attempt to sustain balance between the prior knowledge and new experiences.

Bohlin et al (2009) shed light on cognitive adaptation that can occur by assimilation or accommodation. As for assimilation, it is related to the addition of new knowledge or experience to previous cognitive form; on the other hand, accommodation is associated with changing a cognitive formation when it does not suit new knowledge.

Bohlin et al (2009) closely explained the Vygotskian theory regarding constructivism. Vygotsky realizes that constructivism is a social process that is basically resulted from the advanced interaction with the environment. Most importantly, they investigate Vygotsky's zone of proximal development which figures out how children acquire certain skills with the assistance of others, preferably with their peers, till they become independent. They also shed light on the idea of intersubjectivity during which two or more individuals start sharing a certain mission with different views or perspectives. Thereafter, they together develop shared understanding.

Bohlin et al (2009) compared between some Piagetian and Vygotskian views. From one side, Piaget saw that development occurs before learning since he thinks that children will not be able to learn unless they are biologically ready. Likewise, Piaget reckoned that language is not necessary to improve logical thinking simply because children can use signs or symbols to represent thoughts and concepts. In this sense and for Piaget, children's ability to represent a play is an evidence of their competency in employing signs. From another side, Vygotsky believed that learning with clear instructions cause development. Moreover, he claimed that thinking is difficult to develop without a language, for it is a mental and social process that requires a medium, which is language. In addition, children's ability to perform plays is the result of their ability to use language and to interact with the society.

Bohlin et al (2009) recommended certain suggestions to enhance students' learning depending on the constructivism theory. These suggestions include:

1- Supporting learners to be active and collaborate with others to explore their surrounding environment and become more meaningful by relating it to real-world or previous knowledge.
2- Employing dynamic testing to interactively assess students' thinking to guide and support them using feedback
3- Relating new concept to previous knowledge whether by assimilation, accommodation, or referring to everyday social life
4- Giving consideration to cultural differences while integrating social interactions. While some students in certain countries accept to participate with the other gender, other learners might reject it.
5- Taking the wait-time into account since constructing knowledge requires students to explore, relate, then build schemas using various cognitive processes.

6- Exposing students to the same material in different ways by conducting different goals and showing different perspectives so that they will take different opportunities to structure or modify their knowledge.

Behavioral Theories

They were created during the turn of the 20th century, and they were heavily influenced by Edward Thorndike and B.F. Skinner's research. According to this view, most learners are passive learners. They only react to external cues offered by the teacher through rewards and punishments, i.e. rewarding desirable behavior while punishing desired behavior. This method of teaching is sometimes referred to as operant conditioning, and it holds that students are like blank canvases. When teachers stimulate a student's learning, then they are transferring information to that student. The use of behaviorist teaching methods is pervasive in schools now and in the past. They can be noticed in pedagogies like drill and practice, question and answer, guided practice, routine review, and positive reinforcement, for learning activities that require students to retain and recall topic knowledge as well as other lower-level cognitive tasks, behaviorist techniques may be suitable. However, they fall short in getting pupils to engage in advanced thinking, such synthesis, analysis, and application. (Hinton, 2021)

Bohlin et al (2009) stated:

> "Classical conditioning, or classical learning, is based/ on the pairing of these involuntary behaviors with events/ that do not evoke an automatic response. These events/ are called neutral stimuli and include shapes, behaviors, / sounds, and smells. In classical conditioning, learning will occur when a neutral stimulus is paired repeatedly/ with an unconditioned stimulus" (p.162).

While behaviors with good effects, satisfiers, are more likely to be repeated in future, behaviors with negative results become less likely to occur later. Additionally, he asserted that learning does not depend on involuntary behaviors, but it is based on voluntary behaviors. Besides, they explained Skinners ABCs. They explained how the antecedents, which can be cues or prompts, cause behavior. After that, the consequences, reinforcement

or punishment, determine whether a behavior will be more or less likely to occur in future. Evidently, they emphasized that reinforcement increases the behavior contrary to punishment which limits the possibility of redoing it. (Bohlin et al, 2009)

Regarding behavioral theories, Bohlin et al (2009) suggested certain techniques to increase desired behaviors such as: shaping, Premark principle and positive practice. They also suggested some strategies to decrease negative behaviors like satiation, extension, overcorrection, and reprimand.

Social Cognitive Theory

Bohlin et al (2009) investigated social cognitive by referring to Bandura's ideas who considers observation as the main reason behind learning that occur either by acquiring knowledge or changing behaviors. Moreover, they shed light on Bandura's assumptions regarding personal traits that play a significant role in learning. In this sense, students with high self-efficacy are more likely to succeed. Bohlin et al (2009) also explained that social cognitive learning can be described as an observational learning which is caused as a result of model and imitator's characteristics. For instance, and from one side, the imitators will focus more if they are observing interesting behaviors to them, and if the models are competent or well-known. From another side, the imitators will also concentrate more if they intrinsically or extrinsically motivated.

Bohlin et al (2009) studied how personal factors can shape learning. They introduced the *triadic reciprocal determinism model of causality* which includes personal, environmental, and behavioral factors. Moreover, they explained the impact of self- efficacy and regulation. For self-efficacy, they explained that students will be more likely to obtain success if they believe that they can do so. They claimed that instructors can increase it by verbal persuasion and modeling. For self-regulation, they stated that students have a better chance to succeed if they can control their feelings, cognitions, and behaviors.

Bohlin et al (2009) provided certain suggestions to improve students' self-efficacy and regulation, and these suggestions include:

1- Verbal Persuasion
2- The provision of descriptive supporting feedback instead of fake praise.
3- Encourage collaboration.

Critical Thinking

Bohlin et al (2009) investigated critical higher-order thinking skills that enable individuals to apply such advanced and complex cognitive competencies to analyze, synthesize, evaluate, learn, and transfer. They also referred to Bloom's taxonomy that distinguishes between lower and higher-order thinking skills. They asserted that higher-order thinking skills are definitely a kind of cognitive processes that enable learners to benefit from the 21st skills to critically think and solve problems. They explained that cognitive disposition which reflects students' desire to find out, to take risk, and to critically think is more important than having complex cognitive skills. They believe that there are many factors that influence thinking depositions including the following:

1. Truth-seeking: whether students tend to understand and find connections or not.
2. Open-mindedness: whether students desire to generate other ideas and options or not.
3. Proficiency in analytical thinking: whether learners desire to accurately organize thoughts or not.
4. Proficiency in systematic thinking: whether students tend to specify goals or not.
5. Proficiency in metacognition skills: whether students tend to observe one's thinking to critically judge it.
6. Confidence regarding using reasoning skills.

Bohlin et al (2009) closely examined critical thinking, and they considered it as the ability to think, wonder, reflect, and use complex cognitive skills to be able later to judge using different reasoning skills. They clarified how students can benefit from certain instructions during solving problems process using critical thinking. For instance, teachers can attract their students' attention to assumptions that they can discuss instead of wasting time on investigating things that are taken for granted. Additionally, instructors have to push their students to guarantee that they form valid interpretations. Moreover, they can attract their students' thinking to the most relevant and beneficial ideas.

Bohlin et al (2009) explained teachers' roles in fostering students' critical thinking. They asserted that teachers have to make their students' thinking visible so that they can measure the critical thinking dimensions, such as clarity, accuracy, relevance, depth, and logic. Moreover, they emphasized the importance of inductive and deductive reasoning in elevating critical thinking. Furthermore, they shed light on the powerful impact that classroom environment can cause. In other words, classroom has to be a supportive and

motivating place where students can be confident to express their thoughts and suggestions. Additionally, they asserted that simple steps can cause remarkable differences in students' thinking. For example, teachers can model some critical thinking skills, reward students who effectively employ them, give more consideration to metacognition by enabling students to observe their thinking and other thinking to evaluate and reflect. Afterwards, teachers can employ reasonable and argumentative questions at classes to guide their students' thinking. They introduced three types of questions as follows:

1- Spontaneous questioning: the questions that aim at enabling students to carefully listen and explore personal attitudes. This type of questions seems to be effective if the topics are relevant to learners' interests.
2- Questions related to exploratory discussions: these questions help educators to assess students' previous knowledge.
3- Questions related to specific discussions: these questions can pave the student's way to dwell on certain concepts and deeply examine problematic dimensions to be able to solve problems later.

Problem Solving

Bohlin et al (2009) considered problem solving as a process by which individuals try to identify problems using a set of complex cognitive skills. Undeniably, they clarified that those skills differ by age. Similarly, they can be different due to the divergent life experiences since not all students share the same experiences in daily life. From one side, they explained that proficient problem-solvers are more likely to quickly complete missions with less errors, maintain good quantity of knowledge in their long-term memory, and they do not tend to be hasty while analyzing data or identifying problems. On other other hand, they explain the obstacles that weak problem-solvers might face. For instance, they might suffer from functional steadiness or what can be described as the inability to utilize one object differently. Furthermore, their weakness in problem solving can be attributed to belief perseverance. Thus, they quickly make judgment due to their overconfidence.

Bohlin et al (2009) introduced certain strategies to elevate students' abilities in problem solving including the following:

1- Algorithms strategy

They figured out how the application of algorithms facilitates the analysis and identification of problems due to validity of their sequential steps. They asserted that teachers can follow

some steps to increase the benefit of algorithms. For instance, they can show certain algorithms and advise students to focus on the most flexible of them. They can also help students differentiate where and when algorithms can be effective, encourage them to write them instead of keeping a mental image, and motivate them to figure out the errors in group work.

2- Heuristic strategy

Additionally, they examined how the Heuristic strategy is effective. This strategy is informal and it depends on the rule of thumb to guess the possible correct answer. Teachers can take different steps to apply this Heuristic strategy. For example, they can divide the main goal into many sub-goals to make thinking a gradual and sequential process, guide students to distinguish between necessary and unnecessary information, and encourage students to communicate and collaborate to share ideas.

3- Problem-based learning

Basically, it depends on integrating collaborative experiment to identify the problems and the factors that might lead to solutions. In this way, students become active participants, particularly if they are untraditionally learning by releasing their imaginations and horizons. Learners will be more willing to identify the problems and predict the solutions if they imagine that they are scientists, geologists, or even astronomers.

4- They provide teachers with other general techniques including specifying the problem and the goals, assuming and applying certain strategies, observing students', and predicting the results.

Metacognition

Bohlin et al (2009) affirmed that metacognitive skills are important to both teachers and learners to observe and think about their thinking and cognitive skills to develop them, to distinguish the effective skills, or even to be able to determine when a skill is a good option or not. Definitely, they thought that learners can be guided by benefiting from metacognitive knowledge and regulation. While metacognitive knowledge reflects person's awareness of his/her cognitive skills and their functions, metagonitive regulation represents one's ability to control his/her cognition, feelings, and beliefs. For metacognitive knowledge, they claimed that personal knowledge, or what can be described as declarative knowledge, is important while one is trying to evaluate his/her abilities. In addition, they saw that task or procedural knowledge, is significant to metacognitive knowledge to evaluate tasks. Moreover, they thought that strategy knowledge enables students to choose and apply

strategies, and this knowledge is developing by age. For metacognitive regulation, they thought that planning, observing, and judgment skills are main pillars to monitor one's thinking.

Bohline et al (2009) investigated the factors that can influence metacognitive development. They consider that biological development has a great role, and individuals regularly show advancement in such skills by age. Moreover, they shed light on the environmental factors which can either impede or increase the enhancement and usage of these skills. For example, the way individuals can carefully listen and participate in fruitful discussions with their families have a better chance to improve their skills. Furthermore, individuals with neurological or mental disabilities are less exposed to develop their skills. Besides, they showed how certain personal traits impact on these skills. For instance, motivated students who are confident with their previous knowledge, especially if they have previously achieved success, are more likely to improve their metacognitive skills.

Bohlin et al (2009) suggested certain strategies to develop learning and language skills using metacogntition. To develop reading, they consider that reciprocal teaching, which is based on organized and collaborative discussions to summarize, explain, expect, and ask questions, is essential to make thinking visible and enable all participants to monitor their thinking and others' thinking. Moreover, they recommended instructors to employ PQ4Rs technique to make students good previewers, discussers, readers, reflectors, and reciters. As for writing, they emphasize the significance of note taking and collaboration with peers to elaborate on ideas or to compare their writings and avoid mistakes.

Hinton (2021) stated that excellent teachers must possess the technical expertise required so that they can offer their students a top-notch education for the 21st century. Bohlin et al (2009) clarified how motivation greatly impacts learning. They clarified that motivation can be intrinsic or extrinsic, and it is the role of educators to motivate their students to elevate learning. They explained how the proficient usage of the extrinsic rewards for long period can increase students' intrinsic motivation. Additionally, they warned teachers from the wrong usage of rewards that can shift learners to external locus of control where they show no desire to participate without being rewarded. Most importantly, they suggested that teachers have to follow certain steps and avoid others to maintain their students' motivation. From one side, teachers must not restrict their students to certain conditions while performing tasks, and it is preferable to avoid the deadlines as much as they can. Furthermore, teachers have to make the classroom's atmosphere collaborative and a place to

realize group creativity, not as a place to compete with others. Teachers have to avoid authoritative structure while teaching, and rewards must not be regularly used. In other words, students must not predict when they will receive extrinsic motivation. To make students more intrinsically motivated, teachers can start their lessons by convincing students how much they are significant and related to their daily life. Moreover, introducing complex tasks and employing collaborative instructions make students more willing to learn. Most significantly, students are more likely to be intrinsically motivated whenever they have the chance to select the activity or the way they prefer to learn by.

2.1.2 Palestinian Curricula

After having a close look on the *English for Palestine* curricula, the researcher can state that they have been designed to enable students communicate using the four language skills. The researcher thinks that there are sufficient activities to practice all of them. Most essentially, functional language is introduced in a simple way that pushes students to communicate and collaborate in different ways including pair and group works. However, there is a limited space to make students critical thinkers because students have only to fill the space or to decide whether sentences are true or false. Actually, only the last period in each unit gives them one opportunity to create their own project or to write a composition. Palestinian teachers and students show proficiency in using various applications to communicate, such as Microsoft Teams and Zoom in the last two years after the spread of Corona virus. However, the researcher believes that it is not sufficient at all, and curricula have to be more enriched by technology-based activities. Despite of the limited chances to use technology, students seem to be creative simply because they are really interested in using technology, and they consider it as the fastest and most enthusiastic way to creativity. As it can be claimed that the *English for Palestine* curricula enable students to communicate and collaborate to express and realize their personal and social needs, the researcher thinks that they do not effectively prepare them for future. Moreover, the cultural aspects are simply covered in these textbooks without dwelling on what students might need in future.

The English for Palestine textbook and its organization

The following factors were taken into account at the time of developing the first English curriculum for the Palestinian schools. In general, approved syllabus writing models are based on objectives obtained from a number of key points of view, including the nature of knowledge, societal demands and values, students' needs and interests, and the teacher's role.

Additionally, flexibility, diversity, choice, and possibilities are all incorporated into the syllabus' design. Flexibility will be demonstrated in the content's composition, level, depth, and age-level division in accordance with the readiness of the students.

The various domains that aimed to be developed by the the curriculum are communicative competence, cultural awareness in which the curriculum aims at raising students' awareness of the present and the outlook towards the future of mankind. As such, the following objectives, study, thinking skills, and values, form the basis for the domain of cultural awareness of the Palestinian EFL curriculum.

The *English for Palestine* consists of three stages:

1. **The Lower Primary Stage (Grades 1-4)**:

At this stage, younger learners should enjoy their first experience of a foreign language. One of the best ways of doing this is by adopting a teaching approach and learning materials which take into account the special nature of this age group, and allow learners to experience success by doing things in English. This level should be based around songs, rhymes, stories and activities carefully matched to the interests of young pupils. It should provide an ideal introduction to how learning English Authentic teaching is important, and it is applied by offering native characters in the textbooks in addition to offering activities that require collaboration to have such polished outcomes.

2. **The Upper Primary Stage (Grades 5-10)**:

At this stage, the curriculum aims at giving students the chance to study in a way that helps them to understand, interpret, and enjoy and work in a variety of genres on a range of subjects. In addition, it aims at gaining knowledge of proficiency with reading micro skills (e.g. skimming, scanning, guessing meaning from context, etc.). Likewise, it improves students' capacity to understand information in a reasonably long and interactive dialogue (verbal exchanges) and improve understanding and interpreting abilities. It offers a chance to gain proficiency in communicating and exchanging ideas (internationally and transnationally) to improve communication and social interaction abilities (negotiation of meaning and conversation management). Finlay, it develops language usage skills in a socio linguistically acceptable manner.

The content of the fifth, sixth and seventh grades is composed of 18 units, which start from listening tasks to reading and speaking, and end with the writing task. However, the content

of the eighth, ninth and tenth grades consist of fourteen units with the same arrangement of the skills.

3. The Secondary Stage (Grades 11–12)

At this point in the curriculum, students are exposed to learn opportunities and experiences that help them understand, analyze, and enjoy written content in a variety of genres on a wide-range of subjects. It improves the utilization of reading micro-skill and the capacity of information comprehension in a lengthy, interactive, and transactional dialogue. In addition, it gives students the chance to learn and recognize different written and spoken texts' stylistic nuances. Moreover, it offers the chance to to assess texts, concepts, and arguments critically and improves students' ability to communicate and exchange thoughts

Remarkably, *The English for Palestine* is designed to realize different goals such as:

1- The use of the four language skills for communicate and expression.
2- Identify parts of speech.
3- Increase students' respect for others by showing different lessons that emphasize the merits of cultural differences.
4- Develop students' high-order thinking skills, such as evaluation, and problems solving.
5- Enable students to read, write, and talk about their national values and heritage using English language
6- Enable students to read, write, and talk about other cultures using English language
7- Make students good decision-makers who are able to select topics and express their thoughts on them.
8- Reflect on reading passages.
9- Respond to different activities.
10- Narrate events or stories.
11- Collect information.
12- Make connection among information.
13- Asses themselves.
14- Assess others.
15- Express needs and emotions.

16- Write notes, sentences, paragraphs, letters, emails…etc.

17- Apply charts and diagrams

18- Learn different kinds of literature including songs, stories, and poems

Karaki (2016) analyzed the main goals for the *English for Palestine- Ninth grade*. She found that the tasks in these textbooks are mainly designed to elevate students' usage of English language, and strengthen their relations with their social environment. She thinks that there is enough space to students to use different competencies like collaboration, creativity, and critical thinking. In addition, she clarifies how such textbooks increase student's motivation to learn and build their confidence by allowing them to engage in free learning chances. To support her claims, she closely examined the textbook, and she clarified that it consists of seven units for each semester, and the last unit is specified for revision purposes. Also, she sheds light on the periods in each unit to show how they are designed to increase students-talk time. Most clearly, she claimed that it has a great balance to make students better users of the English language. In other words, she asserted that all language skills are sequentially presented to obtain best learning. Thus, students start with listening, reading, speaking, and then writing.

Karaki (2016) examined the main features that English textbooks need to include regardless of whether English is being taught as a second or foreign language. First, she thought that the content has to be presented in an organized and logical manner by introducing the aims and grading in addition to offering certain pedagogical methods. Second, she saw that effective books should include attractive layout, such as fonts, colors, and size. Third, she asserted that effective books are supposed to serve local situations so that students can talk about their own religion and culture. Besides that, she definitely investigated the importance of the application of language skills. In other words, she thought that good textbooks have to include a great variety of functional and grammatical language that makes students proficient readers, speakers, and writers.

2.1.3 Developing the Curricula

Scardamalia et al (2010) criticized some curricula because they are not designed in a way that encourages critical thinking or connected knowledge construction. They clarified how certain activities in many textbooks depend on memorization away from using reasoning skills. In many cases, students have only to memorize facts or recite lines without showing

their own perspectives or judgments. Thus, employing the 21st century skills can cause evolution in students' cognitive capacities.

Scardamalia et al (2010) reflected how taking the constructive development in knowledge into account can enable students to benefit from their strong points and to solve their weaknesses. By referring to the Piagetian two main terms, assimilation and accommodation, they explained how assimilation sometimes causes problems for learners in different ages. Young learners; for instance, find it difficult to be convinced that earth is spherical after having imagined it as flat, and adult learners seem hesitant to change their beliefs regarding either biological or natural phenomena. Hence, designing situations or tasks to make learners more lenient with accommodation is an obstacle that has to be encountered.

Scardamalia et al (2010) discussed how important it is to make the educational processes student-centered, and this cannot be realized without investigating students' prior knowledge, and keeping connection with new information. Undeniably, students' previous knowledge is not supposed to be limited to previous grades or lessons. In this sense, it can be related to their daily life.

Scardamalia et al (2010) discussed how metacognition can elevate and accelerate learning if students are aware of their cognitive knowledge and skills. For instance, they asserted the importance of both attention and fluency. Students will benefit more from their and others' experiences and participations if they are able to pay attention and observe. Similarly, learners will be more likely to improve when they devote their attention. Gradually and after devoting attention for the sufficient period, students will be more fluent and proficient in using the skills after they have been focusing for long time. In the same context, they examined how transfer is significant to metacognition, for it enables learners to share their knowledge in a flexible manner. In this way, students show advancement in their learning level. After they have been memorizing, they become able to share their information with others. Hence, they started to be equipped with new skills, including communication and collaboration, to solve real problems by being exposed to different assumptions, interpretations, and solutions. Additionally, they clarified that motivation is a requirement to benefit from metacognition. While they claimed that intrinsic motivation is more effective than extrinsic motivation, they considered that extrinsic motivation can lead to a powerful impact if it is wisely applied. In other words, the overuse of extrinsic motivation can cause negative results, as students often become willing to engage in classroom activities only if

they are rewarded. Most significantly, they provided certain suggestions to sustain motivation. For instance, they believe that social support from classmates or parents is essential. Besides, teachers' selections of activities can increase or decrease motivation. Thus, teachers neither have to choose very easy boring tasks, nor highly complicated frustrating activities.

Scardamalia et al (2010) investigated how social aspects in different communities affect collaborative and communicative learning differently. While some societies regard unknowing as a virtue, others consider it as a vice. Likewise, some societies regard collaboration as a must to belong to group contrary to others where there is more consideration to competition and individual success. Moreover, some schools seem to be impersonal with less formality between teachers and students to make learning enjoyable. However, there are many schools that put limitations and conditions to organize such relations.

Scardamalia et al (2010) explained how collaborative and communicative learning is referred to Vygotsky who claims that cultural and social interactions have a significant role in learning. From a Vygotskian perspective, learning occurs as a result of interactions between individuals and society, and learning shifts from a zone to another by continuous interaction and collaboration with others, especially if this collaboration is with peers who have almost the same cognitive level. Vygotsky thinks that learning is difficult to be obtained without social collaboration, and individuals cannot be autonomous to encounter problems without it. Most essentially, they clarified the relations between the material aspect of learning and the Vygotskian theory which asserts the importance of tools and technology. They have precisely explained that the tools' power is embodied on the influence it leaves on the nature of tasks in addition to the used cognitive skills. Most significantly, tools power is obvious while incorporating the 21st century skills. Not only does technology change the nature of the task, but also students are excelling nowadays in using a great variety of technological devices. In this way, learning becomes more communicative, collaborative, and creative even if it occurs outside schools. Consequently, students will be more equipped with different skills to solve current and future real world problems.

Scardamalia et al (2010) asserted that tests do not measure the basic productive skills that learners need in the 21st century. Accordingly, teachers should create and follow different kinds of assessment for different purposes. They also clarified that summative assessment,

such as, multiple choices, only measure whether students have the ability to retrieve information or not. For formative assessment, they consider it significant to develop students' thinking to fulfill the needs of the 21st century. This kind of assessment makes thinking visible. As a result, teachers have a great chance to improve their students' usage of their cognitive and social skills by observing thinking, providing descriptive informative positive feedback, and giving sufficient time to collaborate and revise.

Scardamalia et al (2010) believes that there is a crucial need to transform assessment to evaluate what students need in this age. Actually, transformations take different forms. For example, in the additive model the 21st century skills are added to the traditional curricula. They stated that an obstacle will be formed if each skill is taught separately. Hence, it will be more effective to students and easier to educators if they are integrally employed. However, they shed light on the difficulties of designing assessments that suit these skills. First, there is no such obvious way to distinguish between specific or domain knowledge regarding the technological skills. Second, learning environments vary from one country to another and sometimes within the same country, so it becomes harder to formulate assessment tools. Third, such concepts of assessment in addition to their tools are not globally used; therefore, there are limited experiences to benefit from.

Scardamalia et al (2010) suggested certain ways to develop assessment. For instance, *Evidence-Centered Design* as a way to assess. What makes it unique is the fact that combines a task with one of the skills of the 21st century. In this way, evaluating students' progress in learning, the acquisition of these skills, and the connection between them will be remarkably flexible. In addition, they saw that *Knowing What Students Know* enables teachers to measure their students' prior knowledge in addition to the cognitive skills they are able to use while retrieving information. In this way, educators can see to what extent their students are cognitively skillful to suit the needs for their age. To accurately and proficiently evaluate students, they stated that teachers must specify the goals for the skills they would like to measure. The goals of problem solving; for instance, are definitely different from one field of knowledge to another. While it aims at developing visualization in science, it focusses on improving the analytical skills for texts in literature. *Evidence-Centered Design* can certainly be more beneficial whenever the communicative skills are utilized among peers. Most significantly, *Evidence-Centered Design* can be really effective in designing formative assessment.

Scardamalia et al (2010) highlighted that the formal and informal monitoring of students' performance is one of the best ways to evaluate the usage of the 21st century skills. Unquestionably, such observation must not be random and without preparations. Teachers must previously decide the criteria they would like to check, and they can also design a rubric so that the evaluation processes can be smoothly conducted. Additionally, they asserted that evaluating the proficient application of the technological environment and application are significant since they are interrelated with the 21st century skills. Accordingly, educators have to take several points into consideration while assessing them such as:

1- Whether the environment is positive and vibrant or not.

2- Whether there are chances to differently represent the stimuli with their interactions or not.

3- Whether learners cognitive process is made visible or not.

4- Whether the cognitive processes require the 21st century skills including collaboration, communication, problem solving, and creativity or not.

5- Whether the access to information is flexible or not.

6- Whether learners can use different tools to examine and find solutions or not.

2.1.5 The Twenty-First Century Skills.

Joynes et al (2018) defined 21st century skills as a group of interrelated skills that enable individuals to solve problems and to increase active participation in a society. They added that these skills help members critically think, collaboratively work, and creatively and competitively engage in divergent activities. Chalkiadaki (2018) clarified that even though 21st century skills have to be integrally taught and applied, they can be classified into different groups including personal, social, digital, and informative skills. While she asserted that analytical thinking, higher thinking skills in addition to creativity are different aspects of the personal skills in the 21st century, she claims that proficient verbal and written communication and collaboration are the most obvious sides of the social skills. Most importantly, she explained that reflection and metacognition are the pillars for managing informative and digital skills competences which can be certainly investigated together.

Chu et al (2017) regarded the 21st century skills as a quick result for the contemporary technological world where people start interacting differently. They found out that this technological transformation has obvious impacts on education simply because students now are being prepared to be more eligible international individuals. In this sense, pupils are never restricted to local culture, but they are more exposed to globally immense and interact with others. This way, learners will be ready to encounter challenge. UNESCO's Delors Report (1996) examined how these skills equip students to be independent thinkers and solvers. This report claimed that such skills are really crucial to help learners do what they learn instead of keeping the knowledge in their minds. Most interestingly, students gradually learn how to do things by collaborating with their classmates and educators.

Chu et al (2017) introduced three main frameworks that facilitate strengthening the 21st century skills, and these frameworks are selected depending on the geographical locations. The first framework is based on organization and economy, and it investigates the influence of data and communication on young members while taking into account the alterations in pedagogical assessment in terms of communication, information, and social norms. The second framework is specifically associated with assessment in teaching which mainly dedicated to pave the learners' ways to acquire and utilize the 21st century skills. By employing technology, the skills are categorized into three main sections in this framework, such as methods of thinking and methods of working. The third framework can be described as a partnership, and it was basically designed in 2002 by a group of leaders and educators. Remarkably, this framework is known by its relation between technology and education. Besides, it embraces about thirty skills like innovation. Most uniquely, this framework provides a beneficial structure for the enhancement of curricula, pedagogies, and assessments.

Erdem (2019) shed light on the differences between the 20th and 21st century's skills. Remarkably, the 21st century skills are essential to maintain students' progress in their complicated present and future while taking into consideration the necessity of continuous technological adaptation. Moreover, he asserted that poor or developing countries are more likely to encounter obstacles in learning and utilizing such kinds of skills. Similarly, he figured out how teachers sometimes are unable to gain them due to the limited facilitation they can have. Trilling and Fadel (2009) thought that teaching these skills mainly depends on applying technology which surrounds the majority of students. Thus, they believed that education has to be dedicated to pave students' way to face their real problems and to be

creative by using technology and reforming education so that knowledge can be effectively used instead of transforming it to be inert later.

The 21st century skills are 12 abilities that today's students need to succeed in their careers during the Information Age.

2.1.6 The Twelve 21st Century skills

The skills of the 21st century are 12, and they are intended to help students keep up with the lightning-pace of today's modern markets. Each skill is unique in way it helps students, but they all have one quality in common. In addition, they are divided into three categories and that what explains the relationship between life skills and 21st century skills (Stauffer, 2022).

1. Critical thinking
2. Creativity
3. Collaboration
4. Communication
5. Information literacy
6. Media literacy
7. Technology literacy
8. Flexibility
9. Leadership
10. Initiative
11. Productivity
12. Social skills

The Categories of the Three 21st Century Skill

Each 21st century skill is broken into one of three categories:

1. Learning skills

2. Literacy skills

3. Life skills

Learning skills: (the four C's) teache students about the mental processes required to adapt and improve upon a modern work environment. Stauffer (2022)

- **Critical thinking**: Finding solutions to problems
- **Creativity**: Thinking outside the box
- **Collaboration**: Working with others
- **Communication**: Talking to others

Literacy skills (IMT): They focus on how students can discern facts, publish outlets, and the technology behind them. There's a strong focus on determining trustworthy sources and factual information to separate it from the misinformation that floods the internet. Stauffer (2022)

- **Information literacy**: Understanding facts, figures, statistics, and data
- **Media literacy**: Understanding methods and outlets where information is published
- **Technology literacy**: Understanding the machines that make the Information Age possible.

Life skills (FLIPS): They consider intangible elements of a student's everyday life. These intangibles focus on both personal and professional qualities. Stauffer (2022)

The five 21st century life skills are:

1. **Flexibility:** Deviating from plans as needed
2. **Leadership:** Motivating a team to accomplish a goal
3. **Initiative:** Starting projects, strategies, and plans on one's own
4. **Productivity:** Maintaining efficiency in an age of distractions
5. **Social skills:** Meeting and networking with others for the mutual benefit

Overall, these categories cover all of the 21st century skills that contribute to a student's future career. Stauffer (2022)

2.1.6 The Skills of 21st Classroom (4Cs)

Saleh (2019) explained that these skills are developed in America back in 2007 to elevate education and to make learners more productive and creative members in societies, especially in their careers. He added that these skills cause such a remarkable transformation

in terms of the pedagogical aims all over the world. Therefore, curricula, plans, methods, and assessment have been modified to suit the new purposes. Most significantly, he asserted that these modifications have been really helpful in making students more independent thinkers, brave participants, and creative doers who are willing to exploit many chances to improve their capacities.

Pešikan and Lalović (2017) classified these skills into different groups such as: psychological competences, problem-solving skills, creativity, critical thinking, and initiative competences. To make them well-arranged, they also divided the abovementioned groups into subgroups so that they can logically investigate several sides, such as self-efficacy and self-regulation.

Saleh (2019) considered critical thinking, collaboration, communication, and creativity as the four main skills in the 21st century. He closely examined their impacts in teaching English as a foreign language. Chiruguru (2020) emphasized that the four skills, critical thinking, collaboration, communication, and creativity, have to be immensely applied in classrooms due to the fact that life is changing to be more sophisticated by years, and students have to be well-equipped to be productive and positive members inside and outside their schools whether in present or future.

1. Creativity

Chiruguru (2020) investigated how creativity is essential to be drawn in classrooms to make students more initiative and to encourage them to make up new inventions. For instance, he clarified how students nowadays have a great variety of options to communicate their thoughts and suggestions. They can creatively animate or program things instead of restricting themselves to traditional paintings. In this way, he claimed that students' creativity is undeniably a crucial element to make them more independent and successful in their changing and competitive world. Most significantly, he asserted that students must be given adequate chances to explore, think, and learn from their mistakes. Besides, he introduced three different ways to define creativity. First, creativity can be related to thinking by employing a great deal of ideas and cognitive processes that can help them elaborate and evaluate. Second, it can be defined in terms of working with others by measuring how much it enables a member to apply, improve, and transfer experience or thoughts to others with accepting divergent views. Third, it can be associated with innovation that leads to concrete progress. Voogt and Pareja Roblin (2010) regarded creativity as the ability to form and

analyze new ideas to release one's thinking from the arbitrary box with exploiting the learning chances by taking risks and committing mistakes.

Educationally, creativity increases with innovation and imagination that release students' thoughts to create new ideas whether by using simple or advanced cognitive processes. To guarantee positive academic performance, teachers must always attribute creativity to the products or the outcomes, not to the personalities. Logically speaking, learners undergo several stages to reach creativity. For instance, they explore the problems, look for solutions, think about assumptions, try to apply these assumptions to see whether that are effective or not, and communicate with others to share their solutions and results. Definitely, the more students are given freedom and time, the more they will make attempts to reach creativity. Obviously, the majority of English language teachers are encouraged to implement the principles of creativity in their classes, and they think that it leads to such flourished outcomes, specifically while teaching speaking and writing skills due to the fact that they are productive skills through which students can imagine and express. Certainly, teachers are required to plan, monitor, assist, and provide feedback; hence, their supervision is really important to save their students' time and to guide them without any restriction. (Saleh, 2019)

Dianawati and Mulyono (2016) suggested certain strategies that increase students' motivation to be creative during learning English language skills. Storytelling, drama, role-play, drawing, and singing can expand learners' horizons, especially if positive environment is available. In other words, classroom facilitation in addition to teachers and learners' positive attitudes, methods, beliefs have remarkable roles during incorporating creativity.

2. Critical Thinking

Voogt and Roblin (2010) considered critical thinking as the ability to raise meaningful and argumentative questions to identify problems, investigate solutions, form different perspectives, and reflect on the learning processes.

Chiruguru (2020) explained that critical thinking enhances students' abilities to find or create flexible solutions for different problems, and it enables them to benefit from the latent and patent relations among different subjects. Furthermore, he clarified that it is significant simply because it can maintain students' concentration and deepen their thinking to be more

logical and analytical. Moreover, he figured out that critical thinking can be measured by the use of reasoning such as: inductive methods evaluation, reflection, and taking decisions.

Saleh (2019) explained that critical thinking was actually established by the western countries. Thereafter, it has spread and became an essential international concept that mainly depends on using cognitive abilities to benefit from meta-cognitive skills including comprehension, application, explanation, and regulation. Moreover, he asserted the necessity of employing it so that the improvement of linguistic skills can be facilitated, especially if pupils are motivated to learn. From one side, he explained that teachers are facing certain problems in improving this skill due to the limited period of time given while they have to cover long materials. From another side, he figured out how educators can accelerate teaching this skill. For instance, he saw that instructors must be knowledgeable and motivated to give clear instructions, ask questions, and apply collaborative learning. In all situations, he thought that teachers have to always be cautious of the sophistication of these skills so that they can prepare the suitable methods within logical periods.

3. Communication

Chiruguru (2020) defined communication as the capacity to express thoughts, pose questions, deliver notions, and offer suggestions. He clarified how communication has been greatly fast and flexible because of the current technological world. Obviously, he asserted that students will never be able to recognize values, follow orders, or even understand surface or implied meanings without being able to effectively communicate. Obviously, he claimed that both collaboration and communication are interrelated, and they depend on each other. In other words, communication will be meaningful only if students and teachers are collaborative.

Saleh (2019) regarded communication as a main purpose for teaching language, and without it learning can never take place. In addition, he asserted that communication is not a choice that teachers can use, but it is a must. Hence, teachers have to differentiate between different communicative techniques that they have to use in different pedagogical missions so that they guarantee the best interaction and learning. Similarly, he confirmed that teachers have to start regarding themselves as assistants in classes, not as the only sources of knowledge or the only authorized members. Certainly, he recommended the application of group discussions, group games, and pair works with giving relevant ideas that attract students'

attentions and interests. Finally, he reckoned that communication can be tough if students are not trustful or eager to engage in classes.

4. Collaboration

Chiruguru (2020) defined collaboration as the ability to proficiently work and compromise with other teams to achieve common aims. Also, he examined how the combination of talents, experiences, and effort to realize shared goals can be effective in classrooms, especially if technology is properly exploited to gather local and international cultural diversity. Moreover, he examined how collaborative work is significant in classes, for it transforms knowledge and creates new ways to accomplish tasks.

Saleh (2019) believed that collaboration enables students to share efforts, responsibilities, and results to accomplish shared goals or tasks. He clarified how well-unstructured small groups can show advancement whenever they join their suggestions and works. Most obviously, students' sense of belongingness increases when they find that they all have to equally work to obtain success, especially if they are surrounded by positive pedagogical environment. Therefore, high- leveled learners tend to be more autonomous and positive when they try to help low-achieved students to realize group enhancement.

Johnson, et al (2013) introduced certain techniques to increase collaboration in classrooms, such as:

1- Giving detailed and supported instructions
2- Encouraging positive interdependence
3- Observing students' performance and assisting them when necessary

Saleh (2019) reflected on the difficulties that may face educators during fostering collaboration. In many cases, teachers are struggling with long materials and tasks besides the huge numbers of students in a class. What makes collaboration difficult is the differences among different activities. Teachers sometimes have disabled students in their classes, and they think that they have to directly help this kind of learners. Most widely, schools are not generally equipped with collaborative tools, and some social factors limit collaboration. For example, female learners do not accept to share males in many countries.

2.1.7 The Integration of the 21st Century Skills

Scardamalia et al (2010) recommended to systemically employing technology in education to guarantee better development of the 21st century skills. Hence, they thought that technology must be offered in an encouraging environment that is based on building and transforming knowledge. The more the knowledge is transferred using technological devices, the more these skills will be improved.

Scardamalia et al (2010) clarified why it is important to develop the 21st century skills. First, they believe that they are really essential to prepare learners to their challenging and competitive future so that they will be more likely to be productive and satisfied with their lives. They explained that the application of these skills also develop human values that can foster social integration. Students, for instance, will be less selfish and more extrovert whenever they collaborate to achieve group success. Moreover, they thought that pupils' cognitive skills in addition to their creativity can remarkably flourish due to sharing suggestions. In these processes, their feelings and thoughts become more visible, so they acquire interpersonal and intrapersonal skills that prepare them to be good decision-makers. Moreover, by making their emotions and thoughts visible, they will build bridges of trust, creativity, and enthusiasm to maintain learning outside schools using technological devices. Along with all of these merits, students will gradually become better researchers, brave solvers, confident speakers, and autonomous individuals. Constructively, these skills enable students to communicate and coordinate to be better problem solvers. Definitely, combining students' capacities bridges the gaps among them and pushes them to higher thinking levels till they become innovative to establish new ways or notions.

Fisser and Thijs (2015) investigated the integration of the 21st century skills into curricula. They clarified that there are many differences in the designed models to incorporate these skills. For example, the teaching practices and materials are remarkably varied. However, they share the set of skills including communication, collaboration, critical thinking, and creativity. In addition, all models appreciate the values of interpersonal, intrapersonal, social, and technological skills. Afterwards, they stated that incorporating these skills require educators to study three main phases. First, they have to conceptualize models to select the suitable one with taking into account their financial and technological abilities. Second, they have to analyze the materials to check whether the 21st century skills can be applied or not.

Third, they also need to analyze the curricula from different teachers' perspectives while start integrating the skills to benefit from experiences.

Scardamalia et al (2010) examined the prominent role that the 21st century skills play in creating knowledge-based environment where learning is appreciated, students are encouraged, and creativity is built by the continuous support, observation, collaboration, and elaboration. They added that the organized sharing of intellectual informative resources leads to unpredictable result.

Scardamalia et al (2010) claimed that transformation is needed in the educational systems, especially at schools, so that the application of the 21st century skills will be more effective. For instance, schools have to be a place that is based on values, and build knowledge away from just filling it in students' minds. Furthermore, teaching has to be student-centered to guarantee positive and helpful participation and collaboration. Besides, they assert that there are many effective approaches to be applied to make these skills more applicable. Working backward from goals approach, for instance, guides students by making them aware of the main aims and sub-aims. In this way, students construct knowledge in a meaningful way, especially while benefiting from these skills. Most significantly, they emphasize the importance of knowledge creating organizations at schools due to its productive and creative results, particularly whenever these organizations are facilitated with technology. In such organizations, all members have equal chances to take decisions, and knowledge is widely and unrestrictedly shared. Thus, members enjoy good relations that are embodied in cooperation. After knowledge has been regarded as a social outcome, collective responsibility becomes more obvious; therefore, individuals can determine the deadlines, and they become more committed to achieve missions. While the 21st century skills are considered an integral complex set of skills in knowledge creating organizations, they are regarded as separated skills at schools while investigating the curricula or assessment.

Drake and Reid (2018) shed light on the benefits of KDB strategy, the application of the project-based learning, and backward design to teach the 21st century skills. Starting with KDB technique in the 21st century, the Know is related to the conceptual knowledge away from memorization and route-learning, the Do is associated with thinking and doing task using higher-order thinking skills, and the Be has to deal with improvement of educational methodologies to elevate cognitive, social, and technological skills. As for the project based environment, it enables students to ask sequential deep questions using inquiry. In this way,

students develop their cognitive thinking using logic, communication, and collaboration if they discuss. Most importantly, what makes this kind of projects really helpful is the fact that students' inquiries are usually related to real world experiences, and they are not restricted to one discipline of knowledge, so students have to transfer and utilize what they learn in a subject to accomplish tasks in another one. Backward design increases student's opportunities to be creative and critical by following three steps. First, curriculum's design mainly depends on KDB technique to fulfill students' needs. Second, forming different forms of summative assessment to ensure that students have done with KDB. Third, offering daily activities with clear instructions and tools to serve formative assessment to guarantee better scaffolding in the learning environment.

Scardamalia et al (2010) asserted that language building will enhance remarkably by using the 21st century skills, especially if technological facilitations are available. For them, technology not only facilitates accessing information, but also makes the assessment easier. For instance, teachers can easily observe whether students are communicating, cooperating, and improving their academic and technological skills or not. They also figured out how formative assessment is necessary to measure students' development of the 21st century skills since these skills cannot be measured depending on one situation or product. Students need adequate time and attempts to move to higher levels, and summative assessment cannot suit their enhancement within long period of time during which students need to search, collaborate, invent, and reflect.

Fisser and Thijs (2015) asserted the significance of supporting teachers to incorporate the 21st century skills. First, teachers, especially novice teachers, need to be guided with the specification of the skills, and it is preferable to organize them in the textbooks. Second, they need to be assisted to proficiently develop. This development basically depends on face to face and online workshops and activities where they can share knowledge and experiences to elevate their performance. Third, teachers need to be equipped by a great variety of resources, electronic resources in particular, to be a good model to their students.

2.1.8 The demand of teaching 21st century skills

The 21st century skills help connecting the content knowledge to real-world applications and problem situations. This would enable students to see how and what they are learning and the way by which they can connect it with their lives and the world around them. The work

that is asked to be done by students must be authentic, relevant, and mirrors real life. (Beers, 2020)

Moreover, it emphasizes the concept of deep understanding of learning by focusing on projects and problems that require students to use the content knowledge in new ways and to extend their understanding through collaboration with others. On the other hand, it may have a great effect in helping students understand and monitor the thinking processes they are using by including metacognitive activities. This may require students to reflect on their use of thinking structures and the effectiveness of the thinking strategies they have employed. (Beers, 2020)

Because our students are part of this development universe, they have to use technology to access, analyze, organize and share what they are learning and to be independent learners who can locate appropriate tools for the task.

The 21st century skills also provide opportunities for students to become "creators as well as consumers of published information" (Apple, 2008) by providing opportunities for creating and verifying their own entries in collaborative sites and evaluating contributions of others.

They give students the opportunity to engage in solving complex problems that require higher order thinking and the application of content and to work collaboratively as they gather information, solve problems, share ideas, and generate new ideas. In turn, this would result in new perspectives and solutions to problems. (Beers, 2020)

The 21st century skills prepare students to a developing life and career skills by creating opportunities for them to become self-directed learners who take responsibility for their own learning and learn how to work effectively with others.

They encourage students to make connections between subjects, concepts and ideas and with others, including those outside of the classroom. (Beers, 2020)

2.1.9 How to Add the 21st Century Skills to Curriculum?

1) **Objectives**

Bring skill-building to light right from the start. Educators can and should make goals part of the process for any learning activity. My project-based learning resources, particularly my self-directed project based learning starter kit, include goal writing in the personal

learning plan and project-development phase. Encourage students to create at least one goal per experiential learning activity that is skill-based. (Segar, 2021)

2) **Activities and tasks:**

Memorization is unnecessary and ineffective if deep learning is the dominant objective. Practicing knowledge in this way might help learners build muscle memory, but learning would be far more effective if those reviews were offered in conjunction with activities for learning the 21st century skills. (Segar, 2021)

3) **Strategies**

Some of the innovative active learning strategies that facilitate the application of the 4Cs of the 21st century learning is Individual, Pair and Group Tasks, Projects and Activities, peer teaching and reviewing, presentations using ppts, AVs, and handouts. In addition, mind mapping, Venn diagram, burger paragraph, slow writing paragraphs, and many more GOs are considered as scaffolding techniques that can be used to make studying simpler and more engaging for learners. (Segar, 2021)

4) **Assessment:**

Rubrics are great assessment tools that can include relevant skills as an assessment category such as public speaking. Students like to produce their knowledge according their points of view; they like to design phase of the project as a category in their self-generated rubric. (Segar, 2021)

5) Reflection:

Reflection is an essential part of the experiential learning process. If students are making goals about the 21st -century skills, those goals would be irrelevant unless they're revisited and reflected upon. (Segar, 2021)

2.1.10 Connecting learning environments and formative assessments to large-scale tests

Scardamalia et al (2010) examined the various three approaches that aim at evaluating the 21st century skills. The first approach concentrates on the proper use of technology by the

application of proficient tests such as: *International Computer Driving License and Technology Proficiency* test in America. By this kind of tests, educators can have a clear image of their leaners' technological levels. The second approach focuses only on the skillfulness while using the 21st century skills to solve real-world problems. To do so, instructors must assess their students' domain knowledge in addition to the usage of these skills. The third approach is performed by employing technological tests that are designed to measure their technological skills and students' content knowledge together.

Scardamalia et al (2010) claimed that *knowledge-building environments* include many aspects as follows:

1- Fostering participants to share knowledge.
2- Encouraging members to collectively take responsibility.
3- Enabling individuals to adapt the continuous changes in their lives.
4- Pushing participant to be open and to accept different perspectives.

2.1.11 Using Mobiles to Incorporate 4Cs

Setiadi et al (2019) reflected on how students tend to read more if e-books are utilized because of their flexibility. By using e-books, students' knowledge cannot be restricted to one source, and they can make learning more communicative and interactive. Learners are enthusiastic to read and engage in educational games. Besides, e-books elevate critical and creative thinking due to the instant communication they offer among students and instructors. Most knowingly, they provide learners with a great variety of programs by which they can innovatively design and write after planning in collaboration with their educators.

Alqahtani and Mohammad (2015) explained how mobiles are more advantageous than computers due to their unique features. Mobiles seem handier due to their suitable size and weight. This makes students more effective users, especially if these mobiles have such good storage. However, they thought that employing them at classrooms is in its early stage, and educators have to plan and prepare more so that learners can gain the best benefit.

Hashemi et al (2011) defined m-learning as the ability to benefit from handy mobiles and internet to make learning a continuous, collaborative, supportive, creative, and innovative process. They also explained how such technological developments have a positive impact in education. Additionally, they clarified that the abundance of mobiles in addition to

wireless connection cause remarkable motivation, higher achievement, instant support, and helpful quick assessment. Globally, students can share different electronic resources through which they communicate and collaborate to share their interpretations. Students seem to be more enthusiastic to use e-sources simply because a sole source has different merits. By utilizing e-books, for example, students do not need to go to the dictionary to know meanings or pronunciations, for all these needs can be found in their e-books.

Kamaruzama and Zainol (2012) clarified how m-learning is an evolutionary result for the continuous technological and social changes during the 21st century. Despite the fact those students' attitudes and performance positively changed while learning English language using mobiles, not all teachers employ them, and they sometimes spend long time searching. In this case, mobiles will be really effective to students if they are utilized outside classes. Hence, they become more willing to search, participate, suggest, and help others due to the fact that they are really interested in this way. Most noticeably, students show creativity in designing individual and group projects. Besides, they shed light on some factors that make mobiles more effective in learning than other technological device. They are cheaper and handier. In order to guarantee the best learning, teachers have to make students acquainted with the goals and the context so that students can exploit their time anywhere. Most importantly, students can sustain collaborative learning outside schools in this way. They also asserted that students in different stages seem really enthusiastic to maintain m-learning whenever games are included. Accordingly, they exert much effort to understand to be proud of their win later. Definitely, they will be more motivated by time, and best learning can take place only if students are motivated.

Basal et al (2016) reckoned that mobile phones are one of the most prominent technological devices that enable students to sustain creative and collaborative learning outside classes. Most interestingly, they consider that mobiles are really beneficial in teaching words in the target language due to their accessibility and portability. In addition, they thought that students learn vocabulary when they use text messages, for they firstly recall the word and its spelling. Unfortunately, they explained that students have such limited chances to send them because of their high cost. As a result, they suggested that certain applications including *WhatsApp* can be a good choice. What makes such applications peculiar is the possibility to engage in one to one chat or group chat, as students perform pair or group work at class. Definitely, teachers can guide the usage of these applications, and they can assess it by using screenshots or records.

Farrah and Abu-Dawood (2018) investigated how the employment of technological devices, mobile phones in particular, is important especially from constructivist perspective. They clarified how these devices are beneficial in fostering students' autonomy and creativity. In other words, they found that mobile phones make the processes of looking for information, investigation, communication, and collaboration quicker and more effective. Most evidently, they consider that utilizing mobile phones in teaching can easily motivate students definitely because they will learn using their preferred method. Hence, they will have a great chance to be confident and innovative. Actually, students' self-efficacy is more likely to increase whenever they use them since they will see how their teachers sometimes learn from their creativity. In teaching English language, students find it is easier to use electronic dictionaries by which they can find multiple meanings and hear pronunciations in one search. Furthermore, they explained how certain applications can remarkably accelerate learning the four language skills. By using some applications, such as *Longman*, students save time, effort, money, and information and can share it later with their friends. In this sense, mobile phones provide students with a communicative, creative, and motivating way to learn in short time. They also examined the most prominent obstacles that educators and students may encounter while using mobile phones. First, some applications cannot work without internet connection that is not always available. Second, sometimes certain applications require complicated procedures to log in. For example, students often need to create accounts with specific emails, and this undeniably seem difficult to young learners. Third, not all students are financially able to buy them. They emphasized that the best solution for this entire problem is being selective with the applications. In other words, teachers can select applications that work without internet connections, and students can share their phones with those who do not have ones.

Hashemi et al (2011) clarified that the success of m-learning mainly depends on the type of device the students use. Devices sometimes are distracting due to their limited battery life or due to the small size of their screens. Definitely, other devices, such as Nintendo DS, cannot be used at all in learning due to the fact that they are designed only for entertainment.

Hashemi et al (2011) shed light on the reasons that encourage educators to use mobiles in teaching. Such reasons include:

1- Mobiles are more flexible than computers.

2- Mobiles are easier to carry, so students' energy cannot be wasted on carrying heavy bags.
3- Students can use mobiles whenever and wherever they want.
4- Students do not need to be proficient to utilize mobile, unlike computers.
5- Students can access documents.
6- Exams and quizzes can be instantly corrected, so the feedback will be quicker and more helpful.
7- Students can participate and record the lesson.
8- Mobiles are really a good choice for disabled students, such as those on wheelchairs who will find no difficulty in carrying their mobiles from one place to another. Also, they provide beneficial references to students who are suffering from dyslexia.
9- Because they are beneficial and handy for all, they make learning more interactive whether among students and teachers or among students themselves.

Hashemi et al (2011) also covered some disadvantages for using mobiles in teaching. Such disadvantageous include:

1- Some devices have a limited storage space.
2- Some devices have a limited battery life, and they have to be charged instantly in order not to lose data.
3- They are easily broken, unlike computers or laptops.
4- They are more exposed to be out of date due to their continuous updates.

2.2 Related Studies

Review:

Many similar studies were conducted in English language textbooks as well as on other subject matters, especially in science. However, this study is the first that addresses English textbooks in Palestine. This section covers these two categories of studies; those conducted on the English language, and others conducted on other subjects.

2.2.1 Studies on English language textbooks.

Bani - Amer and Khataybeh (2022) in their descriptive-analytical study, the authors used a model for the classification of the 21st century life skills to identify the included life skills—which are thought to be an essential part of the 21st century skills—in the content of 2nd grade English language textbooks in Jordan. These skills include using technology, critical thinking, and communicational skills. The researchers created the content analysis card to gather information pertinent to their research. The study's findings revealed that there are differences in how the nine main domains of life skills, which are: problem-solving, critical thinking, effective communication, decision-making, creativity, interpersonal relationships, self-awareness development, and empathy, are presented in 2nd grade English language textbooks. Even, the way objects are presented varies, even within one domain. The results showed that there are 2676 life skills covered in the 2nd grade English language textbooks in Jordan, including effective communication (24.96%), interpersonal relationships (13.57%), decision-making (11.43%), problem-solving (10.61%), self-awareness (10.54%), creative thinking (7.70%), empathy (7.66%), and coping with stress and emotions (7.51%). Additionally, the results showed that across all school disciplines, effective communication life skills make up the biggest percentage of English language textbooks.

Al Jar (2021) aimed to identify the life skills in the secondary school English textbooks used by Saudi students in accordance with a list of life skills created by the researcher. To achieve this goal, a sample of 73 reading texts were chosen from Saudi Secondary School English Textbooks for the 4th-6th grade served as the basis for the development of an Inventory of Life Skills and a checklist for content analysis (i.e. MGSs). According to the study's findings, the panel of experts agreed upon a total of (70) life skills, which were divided into (10) main

categories and (25) subcategories. Moreover, the findings showed that the examined textbooks covered every aspect of the purported inventory of life skills. Yet, there seemed to be an imbalance and a lack of these talents in the way they were distributed. Based on the study's findings, certain suggestions were made.

Rinekso (2021) in his study explored how the 21st century abilities were portrayed in an Indonesian EFL textbook. This study used a content analysis research design. An EFL textbook used by pupils in grade 7 served as the study's subject. The study's findings showed that 12 of the 15 21st century abilities were covered in the textbook. Collaboration and communication were the most prevalent abilities. The abilities were represented using a variety of learning activities, including goals, inputs, processes, roles for the instructor and learner, drawings, and notes. However, media and economic literacy, as well as global awareness, were not included in the textbook. Additionally, it offered too few subjects and resources on technology, communication, and information (ICT). Therefore, it is recommended that future revisions include media, economic literacy, ICT, and global awareness in the contents.

Esen (2021) stated that improvements in communication technology made us live in a globally interconnected society. This means that even the most insignificant of daily contacts are now possible. Nowadays, people require certain skills for the successful communication and collaboration to keep up with these cross-cultural encounters, whether they occur electronically or in person. The 21st century skills are a method to meet this demand. One of these abilities, critical thinking—clear, logical thinking—might be useful for addressing intercultural communication-related problems and assisting students in refining their intercultural communication and interaction skills. In textbooks, the competencies of resources and evaluation measures for teaching English as a Foreign Language (EFL) are employed. In order to address the problems resulting from intercultural communication or the growth of language learners' intercultural competence, this article reviews the goals of scanning the literature to find various applications of the skill of critical thinking and intercultural competence in the EFL context. The investigation also aims at categorizing this usage by examining comparable trends in the papers investigated.

Bakken and Andersson-Bakken (2021) indicated that Norway has created a national curriculum that emphasizes on the development of the 21st century skills. In their study, they examined if and how the tasks in upper-secondary school science and language arts

textbooks have been altered as a result of the curriculum reform. We undertook a content analysis of 5,067 activities from language arts and science textbooks and contrast them with tasks from textbooks that were released prior to the reformation, which we examined in two earlier studies. The results indicated that the activities do not give students enough opportunity to use the skills because there is only a slight shift in each subject's challenges in the new curriculum is emphasized. We put forth the theory that the design of textbook is affected and restricted by culturally specific genre standards, such as the potential explanation for why textbook tasks in Norway—as well as numerous other countries—appears to change so little over time. The implementation of the curriculum and school reform may be hampered by these conventions; thus it is critical to make textbook assignments more understood.

Arabloo et al (2021) presented a study that tried to determine if the incorporation of technology and project-based learning into traditional English teaching classes aids the development of critical thinking and problem-solving abilities, which are crucial for learning English in the 21st century. In a quasi-experimental study, 35 Iranian English language learners were divided into an experimental and a control group. The participants in the experimental group worked on a range of small- and large-scale technology-aided tasks in addition to receiving multi-skill textbook-oriented language education, which was the traditional teaching style used in the class. The participants in the experimental group worked on a variety of big and minor technology-assisted initiatives. While there were no technology-assisted projects for the participants of the control group, they received a multi-skill textbook-oriented language education. The research therapy had a substantial influence on participants' critical thinking and problem-solving abilities in English learning classes, based on the comparison between the control and experimental groups' pre- and post-treatment results on these measures. The results of the current study may be useful for people who want to learn more about the way technology has impacted the modern educational system. The study's findings might be used by curriculum writers and syllabi designers to improve their lesson plans for technology-assisted project-based learning English.

Alsayel (2021) carried out a research to examine the material in the English language textbooks for Jordan's fifth graders and Finland's fifth graders in the context of life skills. The researcher created a list of essential life skills that should be taught in the fifth basic grade. She also created a content analysis card that contained the three life skill categories

of mental, physical, and social abilities. The study adopted a descriptive-analytical methodology, and the Jordanian and Finnish fifth-grade English textbooks served as the study sample. The results showed that there were statistically significant variations between Jordan and Finland in the amount of general life skills included in the 5th grade English language textbooks, favoring the Finnish textbook. The results also showed that there were statistically significant differences in the level of inclusion of the fields of life skills in the 5th grade English language textbook between Finland and Jordan. The findings showed that the Finnish English language textbook lagged behind the Jordanian English language textbook in both manual and mental skills. However, in terms of social skills, the Finnish English language textbook was superior to the Jordanian English language textbook.

Al-Khlan's (2021) stated a study to determine the degree of integration, division, and balance of life skills in the Sharia sciences textbooks for the basic stages, 4th, 5th, and 6th. The entire material of the students' and activities' textbooks for those three grades of the fundamental stage made up the population and the sample of the study. Time management, decision-making, problem-solving, social communication, interpersonal skills, and higher thinking abilities were the domains of life skills that were examined. Data collection and analysis were performed using the descriptive-analytical method. The research revealed an unequal distribution of life skills topics in textbooks for Sharia sciences. The results also revealed that the social communication area was included more than the other areas, and that the personal skills and in certain texts, higher-level thinking and skill concepts were fairly integrated. It is necessary to reconsider how life skills are distributed and how they are included in the Sharia sciences textbooks to achieve a balanced distribution. The remaining areas of life skills were incorporated with a lower-than-expected ratio, and the area of time management was among the least incorporated areas.

Shalehah et al (2020) stated that as a requirement of the 2013 curriculum, their study aimed at understanding the 4Cs capabilities in two English textbooks that were utilized as resources throughout the teaching and learning process for students in the 11th grade. "Bahasa Inggris" and "Contextual English" were the two English textbooks that were studied. In order to collect the data for this study, the researcher employed the content analysis of the documents. Data were analyzed, then published along with its interpretation and comparison. According to the research, the bundle of activities included 1) pre-activities, 2) substance of the materials, and 3) worksheets, which cover the 4Cs from both English textbooks. The pre-

activity and contents are the areas where critical thinking components can be found; however, the communicative and collaborative components can occasionally be found in both. The homework calls for kids' originality as well as collaboration and communication features on it. Additionally, it was discovered that the 4Cs elements of the "Contextual English Textbooks" textbook appear more frequently than those of the "Bahasa Inggris" textbook in the two English textbooks under study.

Barrot (2019) noticed how the Philippines' government has pushed for a new basic education curriculum as a result of recent events in the area and the country. Along with these modifications, the Language Arts and Multiliteracies Curriculum, a new English curriculum, has been adopted (LAMC). In order to evaluate the K–12 English Curriculum in the Philippines from a 21st century learning viewpoint, this essay was set out to do so. The LAMC and the 21st century learning are briefly explained in the opening part of this article, both generally and in terms of English language education. The debate then goes through the LAMC's specificity and coherence; the way it adheres to the 21st century learning concepts, and the way it fits with long-standing rules for language teaching and learning. The results showed that the present curriculum requires to increase the specificity, internal coherence, and integration of several key 21st century learning, teaching, and learning concepts for languages. The essay ends with potential implementation difficulties, recommendations for future design and implementation, and implications for further research.

Eddles-Hirsch (2020) indicated that educators typically do not have a clear concept of how to teach this sort of competence, they occasionally confuse it with creative teaching. He noted that creativity is viewed as an important 21st -century skill. This study aimed at addressing the needs to ducators in this area. This was conducted by discussing the definition of creativity and offering examples on how to develop it using models and techniques that have been to be efficient evidence-based frameworks that foster creativity in an inclusive classroom setting.

2.2.3 Non –English Studies:

As for the life skills, they include problem solving, critical thinking, effective communication skills, decision-making, creative thinking, interpersonal relationship skills,

self- awareness building skills, empathy, and coping with stress and emotions as shown in English language studies in secondary school's textbooks. These skills were also present in different fields of study, such as math, science, and chemistry which made a huge difference in the students' way of thinking and the effectiveness on the learning method in the 21st century. Therefore, many studies were conducted regarding this.

Saputra and Abdulkarim (2022) conducted a study to obtain a deeper comprehension of the texts from Civics Class X in the context of the 21st Century Learning Framework. Critical thinking, problem-solving, creativity and innovation, communication, and teamwork are just a few of the talents that are expected to be possessed by students in the 21st century. Textbooks are tools that aid students in learning new knowledge and abilities. Textbooks on civics are a great resource for students who wish to learn more about civics. A concurrent triangulation approach and mixed methods were used in this study's research design. Data were acquired through text analysis, observation, surveys, and literature review. The findings revealed that: 1) the Civics Class X textbook's content was appropriate; the readability of the Class X Civics textbooks is rated well. The ease, attractiveness, and understanding of the textbook are following the students' abilities.

Pongsakorn et al (2022) employed a random sampling of 512 students in Thailand for the quantitative technique to evaluate the link between the 4Cs of 21st century learning and student performance-effectiveness through the mediating influence of student satisfaction. The PLS-SEM software and SPSS Version 27 were used to evaluate the data that had been gathered. The findings showed that the 21st century learning paradigm (*communication, creativity, critical thinking, and collaboration*) and student performance effectiveness are significantly mediated by the student satisfaction. It suggests that teamwork, critical thinking, creativity, and communication have a big impact on student's satisfaction. Moreover, cooperation, creativity, and communication all have a substantial impact on how well students achieve. The effectiveness of students' achievement is not much influenced by critical thinking only. Teachers, program administrators, and educational leaders should be aware of the model of the 21st century to increase student satisfaction and performance effectiveness.

AL- Muqren (2021) aimed at revealing the extent to which middle school technical education books (first, second and third grade intermediate) are included in the Saudi Arabia

for key and sub-21st century skills. It was a tool for content analysis that has been developed, including the 21st century skills. Firt, learning skills and innovation which include: critical thinking skills, creativity, collaboration, and communication. Second: informatics, information, and technological skills including information culture, media culture, multimedia, and technological knowledge culture. Third: life and career skills including resilience and adaptation skills, productivity and accountability, initiative and self-guidance, social skills, leadership, and responsibility. Thus, the presence of skills is determined by the objectives, content, activities, and evaluation methods shown by the indicators in the analysis form that can be used to indicate the existence of these skills. This is in addition to the percentage of the total list of indicators in the analysis form that has been calculated. The results indicated that learning and innovation skills were the most fortunate to be included in the art education books at the middle school and were included in a frequency of (806) and an inclusion rate of (84.40%), which is considered as a high degree of inclusion. Technological, informatics, and media skills secured a second place and were included in a frequency of (117) and a low inclusion rate of (12.25%). Life and career skills came third with a repeat of 32 and an inclusion rate of (3.35%), a low inclusion score. The average inclusion of the 21st century skills in middle-level art education books (33.33%) indicated a low degree of inclusion.

Al Jurani and Al Khalidi (2021) conducted research that aimed at analyzing chemistry textbooks for the preparatory stage in accordance with life skills. The researchers prepared a list of life skills including thirty skills for seven fields necessary for the analysis of chemistry textbooks and acheive the aims of the research. The research adopted the analytical descriptive approach, the research sample consisted of three textbooks, a chemistry textbook for the 4th scientific grade, and a chemistry textbook for the 5th grade (bio-applied). The researchers analyzed the content of the chemistry textbook for the 4th and 5th scientific grades in the (biological -applied) branch according to the modified tool. The researchers adopted the concept unit (e*xplicit and implicit*) as a unit for recording and repetition and as a unit for the census to ensure the validity of the analysis. Later, the random sample was analyzed and then was sent to a group of arbitrators. The arbitrators agreed on the validity of the analysis, and the stability of the analysis was calculated between the researchers over a period of time and presented to external analysts using the Copper equation. The results showed that the chemistry textbook for the 5th preparatory scientific (biological) grade at a frequency of (4791) with a percentage of (40.80%) among the three

textbooks. The Chemistry textbook for the 4th preparatory scientific class came second with a frequency of (3547) and a percentage of (30.21%). The Chemistry textbook for the 5th preparatory class came last with a frequency of (3402) and a percentage of (28.97%).

AL- Faheed (2021) aimed at preparing a list of the 21st century skills suitable for language course activities for 9thgraders. In addition, it aimed at revealing the availability of how the ninth grade Arabic 21st-century skills in critical thinking, problem-solving, communication, participation, creativity, ICT, life, work, and innovation and information culture. To achieve the objectives of the study, the researcher followed a descriptive approach and designed the content analysis card with a list of 21st century skills. After confirming the validity and reliability of the tool, the researcher started analyzing the educational activities. The study reached the following results. 1. The study identified a list of 21st century skills suitable for ninth grade students, classified in five aspects, and included (34) sub-skills.2. The educational activities that considered the 21st century skills were related to critical thinking and problem solving, and communication and participation in high proportions (73.31%) and (28.32%). 3. There was a loss of balance, inclusiveness, and integration in the construction of educational activities that were in line with the 21st century skills. The recommendation of the study included: 1. planning the Arabic language curriculum to align with the 21st century skills by proposing the organization and inclusion of these skills in the stages of general education 2. Adopt the 21st century skills that were proposed in this study, and be able to benefit from them. 3. Include the 21st century skills in the Arabic language courses by following a specific method that takes into account the balance, inclusion, and integration that generally contribute to the development of these skills.

Al-Suad (2021) The goal of her study was to investigate the needs for kindergarten children's development of 21st century abilities from the perspectives of experts. The descriptive approach was used in the study, and was delivered to a sample of 75 male and female kindergarten staff members. The participants completed two questionnaires: the first was to assess the 21st century abilities necessary for kindergarten students, and the other was to establish the criteria for learning such skills. The survey's findings demonstrated that the study participants highly supported both the 21st century abilities necessary for kindergarten students and the prerequisites for learning them. Some comments and suggestions were made in light of the data obtained.

Al-Shahary (2021) sought to investigate the level of incorporation of the 21st century skills in Saudi textbooks at the intermediate level. The descriptive technique was used, with a content analysis tool consisted of (7) competencies and (62) sub-skills according to the Partnership for the 21st Century Learning Framework. It was applied to (10) stratified random samples selected from (60) textbooks in ten curriculums. According to the data, the proportion of the 21st century skills provided in all textbooks was (50%) with an "average" level. Critical thinking and problem-Solving were the most often mentioned skills (50%), followed by Communication, Information, & Media (28%), Career & Self - Reliance Learning (7%), and Cooperation, Team Work, & Leadership (6%). The research aimed at exploring the inclusion level of the 21st century skills in the textbooks at the intermediate stage in Saudi Arabia. The descriptive method has been adopted by using the content analysis tool which was composed according to the partnership for 21st century learning framework. It included (7) skills and (62) sub-skills and was applied to (10) stratified random samples drawn from (60) textbooks in ten curriculums. The findings revealed that the percentage of the 21st century skills included in all textbooks was (50 %) with an "average" level. The most included skill was Critical Thinking and Problem - Solving with (50%), followed by Communication, Information, & Media with (28%), Career & Self - Reliance Learning with (7%), Cooperation, Team Work, & Leadership with (6%), Computing and information technology (5%), creativity and innovation (4%), and cross-cultural understanding (1%). The findings also showed statistically significant differences at the level of (a 0.05) that were attributed to textbook specialty variable among textbooks regarding creativity and innovation skill in favor of Science textbook, critical thinking and problem - solving skill in favor of Math textbook, and career & self - reliance learning skill in favor of Science textbook.

Al-Harby, M. and Al-Harby, N. (2021) The aim of the research was to identify the level of inclusion of the 21st century skills in the mathematics book for the second intermediate grade in the Kingdom of Saudi Arabia, in light of the common dimensions of the Education and Training Evaluation Commission. The research used the descriptive and analytical approach, and its tool was a content analysis card that consisted of (30) indicators, and were divided into six (6) main aspects, and the research community and its sample from the mathematics book for the second. The intermediate semester for the two semesters: (first and second) in the Kingdom of Saudi Arabia edition (1441/2019) and the results of RA. The research showed the following: - The percentage of inclusion of the 21st century skills in the

mathematics textbook for the second intermediate grade as a whole was (38.44%) with an average degree of inclusion. The percentage of including critical thinking and problem solving skills in the mathematics book for the second intermediate grade is high. The percentage of inclusion of the creative thinking skill in the mathematics textbook for the second intermediate grade was (49.95%) with a moderate degree of availability, in the first semester (53.83%), and in the second semester at the rate (45.76%) with an average degree of inclusion in both semesters., In the second semester, there was an indicator (29.39%).93 %) which shows a low inclusion. The percentage of technology skill included in the Second Intermediate Mathematics textbook was (16.39 %) Low Inclusion; where it was available in the first semester at (16.90%). In the second semester, it was 15.98 %.

Al-Mughrabi (2021) aimed at investigating the degree of inclusion of the 21st century skills - which represents the core of this study-of biology textbook for the ninth grade for the scholastic year 2020/2021. The researcher used the analytical descriptive approach that represented the content analysis method. In addition, the sample consisted of the Biology textbook for 9th Grade for both semesters. A content analysis card was built and improved including the main and sub-skills of 21st century. The psychometric properties validity and reliability were verified. Descriptive statistics through the number of occurrences was used, with their total, percentages, and percentages of agreement between analysts. The results showed that the degree of inclusion for the 21st century main and sub-skills for the 9th Grade Biology textbook in the first and second semesters was low, and none of these main or sub-skills have reached the 40% levels. The results showed that the main skill which was mostly included in the book was critical thinking and problem solving (38.9%) including the sub-skills. The two parts of the book were permissible from any productive skills and questioning with (0%) results. The skill of making judgments and decisions came in with the highest percentage among the sub-skills, despite the low inclusion of all other sub-skills which have reached only (12%). The results also concluded that there was a clear lack of balance in presenting the 21st century skills in the main and sub-skills in the book alike.

Slamet (2020) saw that teaching students in their primary grades in the 21st century is more challenging than ever for teachers. One of the challenges is the necessity for developing teaching 21st century skills, such as Communication, Collaboration, Critical Thinking, and Problem Solving, Creativity, and Innovation (henceforth, 4C). Those skills must be taught at all educational levels, especially in primary school while taking into consideration some

aspects, such as the student's needs and development, since students face the very fast-changing era periodically. Indirectly, the primary students are being part of 21st century society. Based on the mentioned fact, this has led the researchers to conduct this study. Therefore, this study aimed at describing the 21st century learning by integrating it for every grade student at the primary school level in Indonesia. Moreover, a literature review was chosen to be a research method of this study through 5 stages process, namely: 1) Determining the research theme; 2) Collecting relevant articles; 3) Classifying articles; synthesizing articles and highlighting important points, and writing research articles based on the synthesizing result. As a result, two conclusions were found, namely: 1) Teaching the 21st century skills can be done by teachers at all educational levels, and 2) Learning processes at the 21st century can be innovated by teachers by considering the appropriate materials, the students 'needs, and the students' learning conditions.

AL-Shamari (2020) aimed at estimating the degree of availability of the 21st century skills in the physics course (1) course system. The descriptive analytical approach was followed to achieve the study's objectives. The study sample consisted of the Physics course. The study tool was represented in an analysis card built - in light of the 21st century partnership's skills and indicators. The results of the study concluded that: The 21s century skills are available in the course in general at a low rate, and accordingly a proposed vision was presented to integrate the 21st century skills in the physics course. In light of the study results, some recommendations were made to include the 21st century skills in the physics course in an expanded manner. It appeared that it is not satisfactory in its current status. Finally, it is important to take advantage of the 21st century skills that have been reached.

Dahlan (2020) aimed at identifying the 21st century skills included in the Arabic language textbooks for the upper basic stage in Palestine. The researcher used the descriptive analytical method. The study also used only one tool which took the form of content analysis questionnaire, which was developed by the researcher. It included 31 sub skills that belong to seven basic skills. The Sample of the study consisted of the Arabic language textbooks of the ninth and tenth basic grades for the scholastic year 2019/2020. The researcher used frequencies and percentages to analyze the data. As for the results of the study, they showed a low degree of inclusion of the 21st century skills in Arabic language textbooks. The findings of study demonstrated that skills of critical thinking and problems solving came at the top with a percentage of 22.2%, while productivity and accountability skills occupied the second

place with the percentage of 16.1%. Communication and interpersonal skills obtained the third place with 15.3%. Social skills and diverse cultures occupied the fourth place with 14.6%. The skills of information and technology obtained the fifth place with the percentage 14%. Moreover, creativity and innovation skills received the sixth place with 9.6%. Finally, leadership and responsibility skills came last with a percentage of 8.2%. The study recommended that Ministry of Education should include the 21st century skills in all the components of Arabic language textbooks for the upper basic stage.

Khalidi and Kishek (2020) The purpose of their study was to analyze the new Palestinian science and math curricula in light of the 21st century skills. In addition, it aimed at investigating the extent to which these curricula can prepare citizens who have a balanced degree of skills to live effectively in the 21st century. The researchers developed a rubric and then used it as a general framework for the content analysis of the curricula. The rubric consisted of twelve main themes; creativity and innovation, critical thinking and problem solving, communication, collaboration, information literacy, media literacy, information, and communications technology literacy, flexibility and adaptability, initiative and self-direction, cross-cultural skills, productivity and accountability, and leadership and responsibility. The findings of the content analysis indicated that the existing curricula poorly represent the 21st century skills with a low focus and insufficient attention on most skills that had been analyzed. In a second section, the paper offers a general conceptual framework with relevant models for reshaping the curricula with relevant authentic tasks that emerge from the Palestinian socio-cultural context to enable students to accommodate 21st century skills and provide school teachers with tangible mechanisms to enhance student's skills for the 21st century. The paper concluded with a set of policy recommendations, and suggestions for further research about the relevance and effectiveness of this conceptual framework, and the improvement models in the new Palestinian curricula

Stehle and Burton (2019) asserted that there is a need to support students with non-cognitive, or 21st century skills to prepare them for a more STEM-based job market. As STEM schools are created in a response to this call to action, research is needed to better understand how exemplary STEM schools accomplish this goal. This conversion mixed-method study analyzed student work samples and teacher lesson plans from seven exemplary inclusive STEM high schools to better understand at what level teachers at these schools are engaging and developing student 21st century skills. Results: Out of the 67 lesson plans

collected at the inclusive STEM high schools, 50 included instruction on the 21st century skills. Most of these lesson plans designed instruction for the 21st century skills at an introductory level. Few lesson plans encouraged multiple 21st century skills and addressed higher levels of those skills. Although there was not a significant difference between levels of the 21st century skills by grade level, there was an overall trend of higher levels of the 21st century skills demonstrated in lesson plans designed for 11th and 12th grades. We also found that lesson plans that lasted three or more days had higher levels of the 21st century skills. Conclusions: These findings suggest that inclusive STEM high schools provide environments that support the development of the 21st century skills. Yet, more can be done in the area of teacher professional development to improve instruction of high levels of the 21st century Century skills.

Al-Harby (2019) aimed at defining the extent to which the 21st century skills are included in the mathematics book of the third-year preparatory stage pupils. to achieve such objective, the study made use of the analytical descriptive method by analyzing the content of the mathematics book of the third-year preparatory stage pupils utilizing the content analysis form. It was developed in the light of the 21st century skills, namely, three domains, 10 main skills, 22 sub-skills, and 73 sub-indicators. The results of the study showed limited inclusion of the 21st century skills in the mathematics book of the third-year preparatory stage pupils concerning the three domains. In addition, there was a limited inclusion of the main skills apart from the skills of critical thinking and problem solving which were included on a large scale. In light of the results attained, the researcher recommended developing a unified perspective by the Ministry of Education and those responsible for developing curricula concerning the mechanisms of including the skills of the 21st century into textbooks in general and in mathematics books in particular to unite efforts and work. The study also recommended holding training workshops for the in-service mathematics teachers concerning how the 21st century skills are incorporated into the mathematics curricula.

Al-Deri (2019) conducted a study that aimed at identifying the degree to which secondary school teachers in Jordan possess 'life skills as part of the 21st century skills". A descriptive survey methodology was used. The study consisted of 91 Secondary teachers in the Atari Camp and was distributed among six (6) Secondary schools. The researcher developed a questionnaire that consisted of (36) items addressing four main domains: communication skills positive, thinking, anger management', and decision-making and problem-solving.

The study showed that secondary school teachers exhibit a moderate level of life skills. There were statistically significant differences in life skills between genders with female teachers possessing a slightly higher level of life skills. In addition, there were also statistically significant differences based on time in the teaching profession with teachers with more than 10 years of experience demonstrating higher life skills. There were also statistically significant differences based on academic qualifications among teachers in favor of those teachers who have completed postgraduate studies. The life skills of decision-making and problem were ranked highest with an average of (3.96); however, anger management came last with an average of (2.75).

Yousef and Jourea (**2019)** conducted a study to identify the 21st century skills that must be provided in the curricula of the second category of basic education from the point of view of teachers and specialist directors; in addition to defining the degree to which these skills need to be continued in secondary school curricula, and the impacts of the variables (the function, the nature of the course material, and the scientific qualification). In order to achieve the objectives of the research, the descriptive methodology was used. A questionnaire was designed and consisted of 5 aspects and 47 phrases representing 5 main skills of the 21st century skills, which are: (*the critical thinking and problem solving, the creativity and Innovation, the dialogue and communication, information technology culture, the life and work.*). The sample consisted of (289) teachers and (70) directors. The research results showed that all skills of the 21st century included in the questionnaire were highly approved, and ranked as follows (*the work and life, the investment of technology and information the creativity and innovation, the critical thinking and problem solving, the dialogue and communication*). All of the major 21st century skills included in the questionnaire were highly appropriate to the continuation of these skills in secondary school curricula. There were no statistically significant differences between the average responses of the members of the research sample regarding the 21st century skills that should be available in the curriculum of the second category of basic education according to variation in the nature of the work of the sample members (teacher, directory), and in the scientific qualification. There were statistically significant differences between the average of responses' scores of the members of the research sample in relation to the 21st century skills that should be available in the curricula of the second category of basic education according to the variable nature of the subject in favor of the scientific subjects for the skills of

creativity and innovation, the investment of technology, Dialogue and communication, whereas there were no differences for the other skills.

2.2.3 Similarities and differences between previous studies:

Several studies were conducted and aimed at analyzing the content of English language textbook in light of the 21st century in the first section whether in Arab countries or in western ones. These studies include th following: (Bani Amer and Khataybeh, 2022), (Al Jar, 2021), (Rinekso, 2021) and (Alsayel, 2021); however, other studies aimed at analyzing other subjects like mathematics, chemistry, biology and even kindergarten curriculum. For instance, Sapura and Abdul Karim (2022), Andersson, Bakken (2021), Al Jurani and Al Khalidi (2021), Al-Mughrabi (2021), Al-Khlan's (2021), Al-Harby M. & Al-Harby N. (2021), Slamet (2020), Khaldi & Kishek (2020), AL-Shamari (2020), Dahlan (2020), Al-Harby (2019) and Barrot (2019).

Most of these studies, such as Alsayel (2021), Al-Khlan (2021), Andersson and Bakken (2021) and many others adopted the analytical descriptive approach that represented content analysis method. On the other hand, some studies adopted a descriptive survey method as Al-Deri (2019) and Pongsakorn et al (2022) who aimed to investigating the relationship between the 21st century learning model (4Cs) and student performance. In addition, Sapura and Abdul Karim (2022) employed a mixed method.

Although there were various kinds of samples of textbooks and subjects that have been covered through studies, they almost adopted the same instrument (21st century skills framework). Some of these studies developed it. These studies include Al-Mughrabi (2021), AL- Faheed (2021), Khaldi and Kishek (2020) and Al-Harby (2019). Others have focused on life skills only like Al Jurani & Al Khalidi (2021) and Alsayel (2021).

The retries of these studies were different in their objectives, instruments, samples, methods and approaches; however, they gave an experimental explanation about the significance of this study. They aimed at identifing the representation of the 21st century skills in different textbooks.

Chapter Three

Methodology and Procedures

3.1 Introduction

This chapter explains the methods and procedures followed by the researcher. It provides information about the population, sample and the instruments of the study. It also describes the validity and reliability of the used instruments. Finally, it concludes with a description of the research procedures and gives information about the research design and statistical analysis used.

3.2 Methodology

The researcher used the descriptive analytical approach due to its appropriateness of the study.

3.3 Population and study sample

The population of the study includes The *English for Palestine* textbook for upper primery stage (5^{th}, 6^{th}, 7^{th}, 8^{th}, 9^{th} and 10^{th}) grades

The sample of this study includes The *English for Palestine* textbook for (5^{th}, 7^{th} and 9^{th}) grades, which is taught in the Palestinian schools since 2014, and was published by Macmillan.

3.4 Instrument of the study

The researcher used the 21^{st} century learning skills framework to achieve the purpose of the study. The researcher adopted such framework which depends on the Partnership for 21^{st} century learning and modified it in accordance with the convenient of the content and the purpose of the analysis. The framework was made up of 30 sub-indicators spread over four main components.

Framework analysis consists of four components (4 Cs') as follows:

1. **Creativity:** It has (10) indicators.
2. **Critical thinking:** It has (10) indicators
3. **Communication:** It has (6)) indicators
4. **Collaboration:** It has (4) indicators

(see appendix No. 1)

3.5 Validity of the instrument

In order to ensure thorough wording of the 4Cs' list, accurate phraseology, and clear components, some skills, and phrases, have been amended to improve the degree of the 21st century skills list validity. The validity of the instrument has been confirmed by a number of professional experts and professors in educational faculties from different universities in Palestine. (See appendix No. 2)

3.6 Reliability of the instrument

The reliability of the content analysis:

-Intra-rater reliability: The researcher used Holst's Equation to check the reliability of the analysis; and conducted the analysis by herself twice two weeks after the first analysis. The agreement coefficient was calculated between the two cases, and the percentage of agreement was (96.8%), which is is a high indicator of the reliability of the content analysis.

Table (3.1): Holisti's Equation for Intra-rater reliability of the analysis

The 21st century skills	C1	C2	C3	C4	Total
The first analysis	6	16	15	12	49
The second analysis	7	15	13	11	46
Agreement Percentage	92.3%	96.8%	92.9%	95.7%	96.8%

-Inter-rater reliability: The researcher used Holst's Equation to check the reliability of the analysis. The researcher has dealt with English language teachers for upper stage grades to do the analysis for English for Palestine textbook 7th using the analysis framework, which was prepared previously by the researcher. The agreement coefficient was calculated

between the researcher and the teacher analysis, and the percentage of agreement was .92 and it was suitable to be used.

Table (3.2): Holisti's Equation for Inter-rater reliability of the analysis

The 21st century skills	C1	C2	C3	C4	Total
The researcher analysis by himself	6	16	15	12	49
The other researcher analysis	7	13	12	10	42
Agreement Percentages	93.3%	89.6%	88.8%	90.9%	92.3%

3.6 Variables of the study:

Nominal variable: the grade (5th, 7thand 9th)

3.7 Procedures of the study:

The study was carried out as follows:

- The identification of the purpose of the analysis
- Previous studies that may benefit the steps of the study.
- Theoretical framework including relevant literature review.
- International models for the classification of the 21st century skills which would help to benefit the research
- Select analysis categories: a set of classifications that are prepared in the light of the content and the purpose of the analysis
- Identification of analysis units: it is the content unit that will be subjected to counting and measurement and the researcher has adopted the idea unit as a recording unit
- Preparing the analysis guide: includes the rules and controls that the analyzer must observe when using the content analysis framework and includes a procedural definition of all the main and subcategories in the framework.

- The reliability and validity of this instrument was approved: this is presented to a group of specialized arbitrators in the field of education from different universities from Palestine
- The Final draft of the analysis framework has been designed
- The other analyst was provided with the aim of the analysis process and the analysis guide.
- Analyze the content of the study sample
- Calculating the ratios of agreement between analysts
- Repeat analysis of the same sample after two weeks by the researcher
- Collect the data results
- Use SPSS software, frequencices and percentages to interpret the results and give recommendations.

3.8 Data analysis

After analyzing the content of the English for Palestine for (5^{th}, 7^{th} and 9^{th}) grades, the researcher used the following statistical forms to understand the degree of the 21^{st} century skills included in the textbooks.

1. **Frequencies and percentages:** to assess the average of 4 Cs' indicators

2. **Holistic equation:** to calculate the reliability of the analysis between the researcher and the other analysts and between the first and the second analysis after two weeks

CR= 2M/ (N1+N2)

N1: The number of categories analyzed in the first time.

N2: The number of categories analyzed in the second time.

2M: The number of agreed categories in the first and second time

3.**Chi – Squer** : To examine the hypothesis of the study, the researcher used the SSPS to calculate the value of the Chi – Squer

Chapter Four

Conclusions

4.1 Introduction

This chapter puts forward the descriptive statistics of the data collected through the study. It presents the results of the study questions.

4.2 Results of the Study Questions

4.2.1Results Related to the First Question

The First Question: What are the frequencies of the 21st century skills in English Palestinian textbooks for the upper primery stage?

To answer this question, the content of 5th, 7th and 9th grade English for Palestine textbook have been analyzed by using the 21st century framework. Frequencies and percentages of levels of content are presented in Table (4.1) and Figure (4.1).

Table (4.1): Frequencies and percentages of 5th, 7th and 9th English for Palestine textbooks content analysis.

Grade	Creativity		Critical thinking		Communication		Collaboration		Total
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	
5th	55	11.31%	143	29.42%	228	46.91%	60	12.34%	486
7th	115	13.54%	249	29.32%	282	33.21%	203	23.91%	849
9th	146	14.41%	319	31.49%	335	33.07%	213	21.02%	1013
Total	316	13.09%	711	30.08%	845	37.73%	476	19.09%	

Figure (4.1) clarifies the percentages of 5th, 7th and 9th English for Palestine textbooks content analysis according to the 4 Cs'.

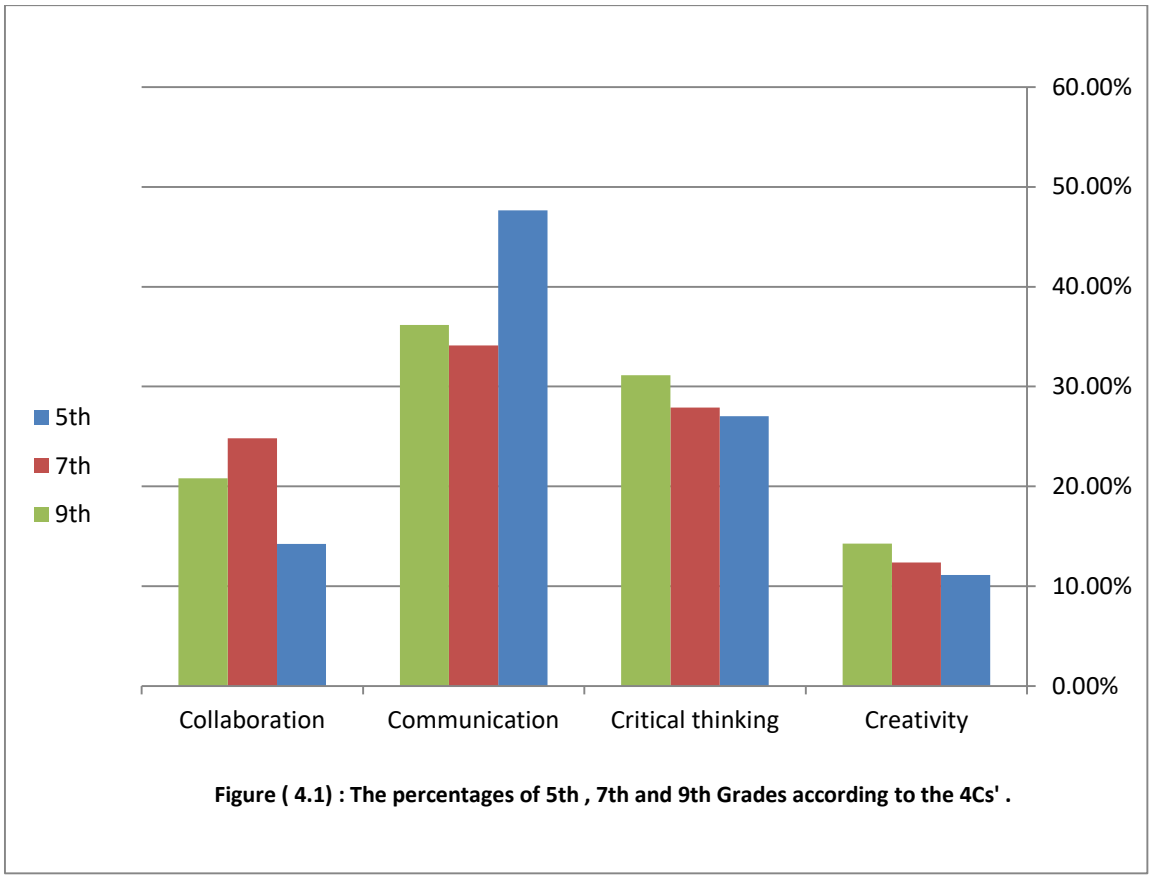

Figure (4.1) : The percentages of 5th , 7th and 9th Grades according to the 4Cs' .

Table (4.1) reveals that the most frequent C in 5th grade is communication (228 frequencies), which represents 46.91%of total 5th grade frequencies. However, the least frequent ones are creativity which scores 11.31%. It also indicates that the most frequent C in 7th Grade is communication (282 frequencies) which represents 33.21% of the total 4 Cs in 7th grade frequencies. However, the least frequent ones are creativity which scores 13.54%. The table also reveals that the most frequent C in the 9th grade is communication which scores (335 frequencies), and represents 33.07% of 9th grade frequencies. However, the least frequent ones were creativity which scored 14.41%.

4.2.2 Results Related to the Second Question

The Second Question: Are the frequencies of 21st century skills graded according to the textbook level?

Table (4.2): Frequencies and percentages of 5th *English for Palestine* textbook content analysis according to the textbook level.

		C1 Creativity		C2 Critical thinking		C3 Communication		C4 Collaboration		Total
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	
	Level A1									
1.	Unit 1	4	12.5%	10	31.2%	13	40.6%	5	15.6%	32
2.	Unit 2	3	9.6%	10	32.3%	14	45.1%	4	12.9%	31
3.	Unit 3	3	9.6%	9	29%	16	51.6%	3	9.6%	31
4.	Unit 4	2	8%	8	32%	13	52%	2	8%	25
5.	Unit 5	2	8%	5	21.7%	13	56.5%	3	13%	23
6.	Unit 6	3	12%	7	28%	12	48%	3	12%	25
7.	Unit 7	3	9.6%	7	22.5%	16	51.6%	5	16.1%	31
8.	Unit8	3	10.7%	6	21.4%	17	66.7%	2	7%	28
9.	Unit 9	0	0%	2	16.6%	7	58.3%	3	25%	12
Total		23	8.89%	64	26.08%	121	52.27%	30	13.24%	238
	Level A2									
10.	Unit 10	2	7.40%	8	29.60%	13	48.10%	4	16%	27
11.	Unit 11	3	12%	8	3.20%	10	40%	4	16%	25
12.	Unit 12	5	14.70%	13	38.20%	13	38.20%	3	8.80%	34
13.	Unit 13	5	14.20%	11	31.40%	15	42.80%	4	11.40%	35
14.	Unit 14	1	7.70%	4	30.70%	5	38.40%	3	23.1%	13
15.	Unit 15	3	11.10%	11	40.70%	9	33.30%	4	14.80%	27
16.	Unit 16	3	7.90%	12	30.70%	21	53.80%	3	7.70%	39
17.	Unit 17	9	27.20%	9	27.20%	13	39.30%	2	6.10%	33
18.	Unit 18	1	6.60%	3	20%	8	53.30%	3	20%	15
Total		32	12.09%	79	27.97%	107	43.02%	30	13%	248

Figure (4.2) clarifies the frequencies of 5th *English for Palestine* textbook according to the textbook level.

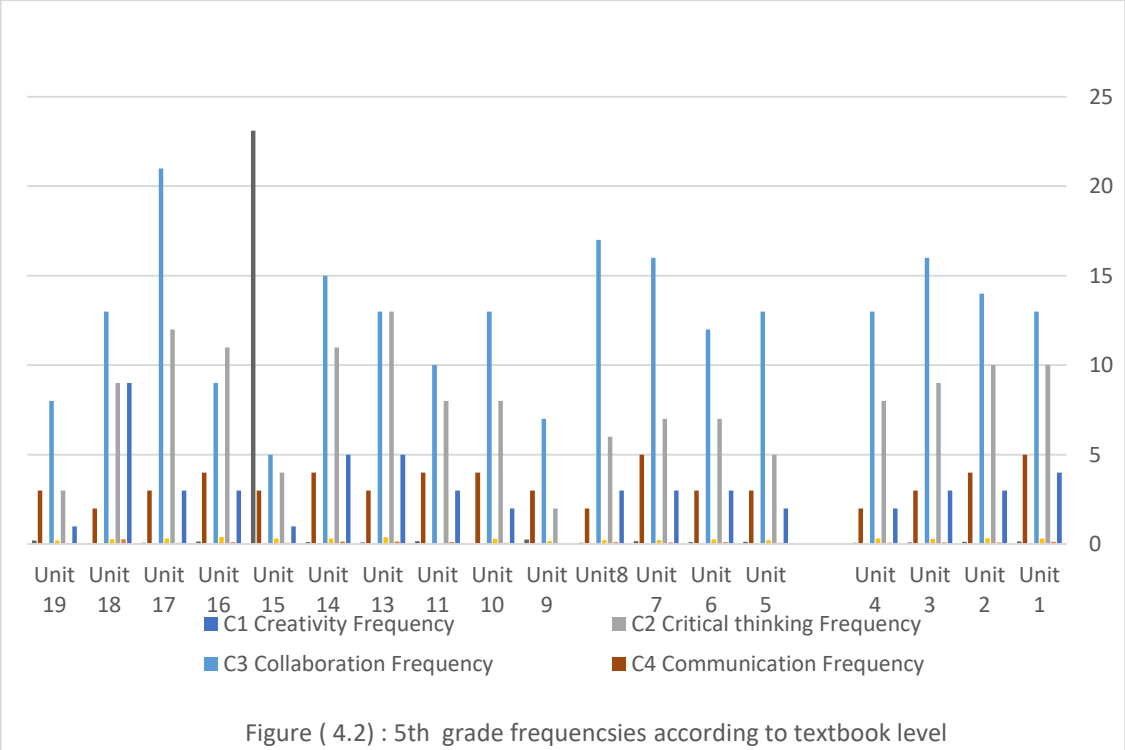

Figure (4.2) : 5th grade frequencsies according to textbook level

Table (4.2) reveals that the most frequent C in 5th grade in level A1 is communication which scores (121 frequencies), and that represents 56.7% of total 5th grade frequencies for level A1. However, the least frequent C is creativity which scores (23 frequencies) and represents 10.95%.

Moreover, it shows that the frequencies are not graded according to the textbook level or units. Creativity has 4 frequencies in unit 1, whereas it has 0 frequencies in unit 9. Besides, communication has 13 frequencies in Unit 1, rising to 16 frequencies in Unit 3, then return back to 12 frequencies in unit 6. Therefore, the unit sequence doesn't reflect the number of the frequencies or percentages but the topic of the unit or the task that covers in.

It also indicates that the most frequent C in 5th Grade is for level A2 is communication (120 frequencies) which represents 45.97% of the total 4 Cs'. However, the least frequent C is collaboration which scores 11.49%. Whereas creativity is more with only one frequent difference.

In addition, like level A1, the frequencies and percentages of 4Cs' in level A2 are not graded. For instance, critical thinking has 8 frequencies in Unit 8 and 13 frequencies in Unit 13, then

getting down to 4 frequencies in Unit 15. While collaboration C4 has 3 or 4 frequencies in almost all units and that's related to the tasks implement conditions.

Table (4.3): Frequencies and percentages of 7th grade *English for Palestine* textbook content analysis according to the textbook level.

		C1 Creativity		C2 Critical thinking		C3 Communication		C4 Collaboration		Total
		Freq.	**%**	**Freq.**	**%**	**Freq.**	**%**	**Freq.**	**%**	
		Level A1								
1.	Unit 1	6	12.2%	16	32.6%	15	30.60%	12	24.40%	49
2.	Unit 2	8	14%	19	33.3%	18	33.60%	12	21%	57
3.	Unit 3	13	17.3%	25	33.3%	21	28%	16	21.30%	75
4.	Unit 4	8	14.5%	10	13.3%	20	36.30%	17	30.90%	55
5.	Unit 5	0	0%	8	36.3%	5	22.70%	9	40.90%	22
6.	Unit 6	8	16.3%	17	34.6%	11	22.40%	9	18.30%	45
7.	Unit 7	6	12.2%	16	32.6%	15	30.60%	12	24.48%	49
8.	Unit8	11	14.6%	26	34.6%	26	34.60%	12	16%	75
9.	Unit 9	2	8%	5	20%	10	40%	8	32%	25
Total		62	12.12 %	142	30.07 %	141	30.98%	107	25.48%	455
		Level A2								
10.	Unit 10	4	8%	13	26.5%	22	44.80%	10	20.40%	49
11.	Unit 11	9	17.3%	13	25%	18	34.60%	12	23%	55
12.	Unit 12	10	17.5%	14	24.5%	21	36.80%	12	21%	57
13.	Unit 13	8	11.6%	24	34.7%	21	30.40%	16	23.10%	69
14.	Unit 14	2	8%	5	20%	10	40%	8	32%	25
15.	Unit 15	8	14.8%	15	27.7%	8	33.30%	13	24%	44
16.	Unit 16	8	16%	12	24%	18	36%	12	24%	50
17.	Unit 17	4	7.80%	11	21.5%	23	45%	13	25.40%	51
18.	Unit 18	2	8%	5	20%	10	40%	8	32%	25
Total		55	12%	112	24.88 %	151	37.88%	104	24.99%	425

Figure (4.3) shows the frequencies of 7th grade *English for Palestine* textbook according to the textbook level.

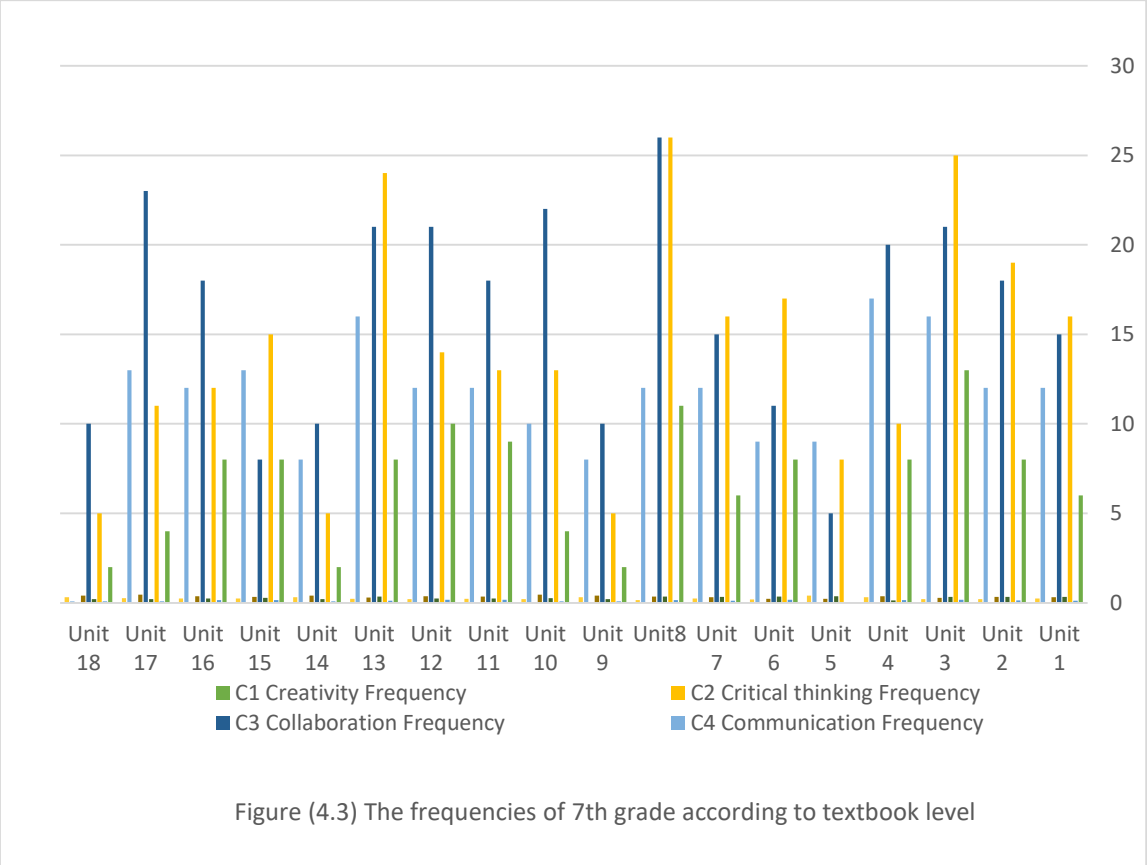

Figure (4.3) The frequencies of 7th grade according to textbook level

As it can be seen from table (4.3) above, the most frequent C in 7th grade level A1 is collaboration which scores (112 frequencies), and represents 34.35% of total 7th grade frequencies for level A1. However, the least frequent C is creativity which scores (36 frequencies) and represents 11.04%.

Moreover, it indicates that the 4Cs' frequencies are not regarded to the units' sequence. Communication frequencies can approve that, it has 15 frequencies in Unit 1, 21 frequencies in Unit 3 and 5 frequencies in Unit 5.

It also indicates that the most frequent C in 7th Grade for level A2 is communication with (178 frequencies) and represents 47.72 % of the total 4 Cs. However, the least frequent C is collaboration which scores (29 frequencies) and represents 7.77%. Hiwever, creativity is more with only one frequent difference.

It is clear from the table above that the frequencies in level A2 are also not graded to the units' follow like level A1.

Table (4.4): Frequencies and percentages of the 9th English for Palestine textbook content analysis according to the textbook level.

		C1 Creativity		**C2** Critical thinking		**C3** Communication		**C4** Collaboration		**Total**
		Freq.	%	**Freq.**	%	**Freq.**	%	**Freq.**	%	
		Level A1								
1.	Unit 1	6	12.20 %	16	32.60%	15	30.60%	12	24.40%	49
2.	Unit 2	8	14%	19	33.30%	18	33.60%	12	21%	57
3.	Unit 3	13	17.30 %	25	33.30%	21	28%	16	21.30%	75
4.	Unit 4	13	16.80 %	26	33.70%	21	27.30%	17	22%	77
5.	Unit 5	12	13.60 %	27	30.60%	29	32.90%	20	22.70%	88
6.	Unit 6	7	18.90 %	25	31.60%	27	34.10%	20	25.30%	79
Total		59	15.47 %	138	32.52%	131	31.08%	97	22.78%	425
Level A2										
7.	Unit 7	2	4.60 %	12	27.9%	22	51.1%	7	16.3%	43
8.	Unit8	20	25.6 %	24	30.7%	20	25.6%	14	17.9%	78
9.	Unit 9	14	14.8 %	29	30.8%	32	34%	19	20.2%	94
10.	Unit 10	16	17.6 %	36	39.5%	24	26.3%	15	16.8%	91
11.	Unit 11	14	16.5 %	23	27.1%	30	35.3%	18	21.1%	85
12.	Unit 12	14	15.7 %	30	33.7%	24	26.9%	21	23.5%	89
13.	Unit 13	5	7.70 %	15	23%	30	46.1%	15	23%	65
14.	Unit 14	2	4.60 %	12	27.9%	22	74.4%	7	16%	43
Total		87	13.39 %	181	30.08%	204	39.96%	116	19.35%	588

Figure (4.4) shows the Frequencies of the 9th English for Palestine textbook content analysis according to the textbook level.

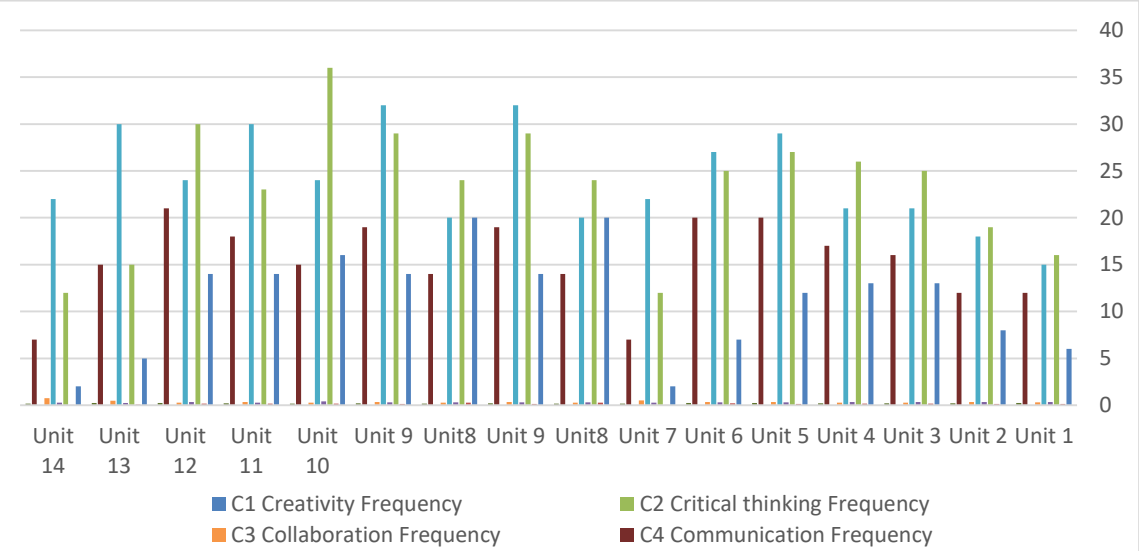

Figure (4.4) : The 9th grade frequencies according to textbook level

As it can be seen table (4.4) and figure (4.4) above, the most frequent C in the 9th grade in level A1 is communication which scores (180 frequencies), and represents 34.28% of total 9th grade frequencies for level A1. However, the least frequent C is creativity which scores (83 frequencies) and represents 15.8%.

It also indicates that the most frequent C in the 9th Grade for level A2 is communication with (192 frequencies) that represents 34.7 % of the total 4 Cs. However, the least frequent C is creativity which scores (90 frequencies) and represents 16.27%.

Moreover, table (4.4) reveals that frequencies of C4 collaboration in level A1 are graded. They rise from 12 frequencies in Unit 1 to 16 frequencies in Unit 3 till 20 frequencies in Unit 6.

The same phenomenon with communication frequencies which rise from 15 in Unit 1 to 18 in Unit 2 and 21 in Unit 3,4 and 29 in Unit 5. However, it scores 27 frequencies in Unit 6 because Unit 6 is a revision unit that has less number of tasks and periods.

In general, it has been noticed that there is a kind of stability in the percentages of critical thinking in level A1. For example, it represents (33.30%) in Units 2, 3, 4 and 12. Moreover, in creativity in Level A2, it scores 14 frequencies in 3 units out of 6.

4.2.3 Results Related to the Third Question

To answer this question, the researcher used two dimensions. The first is talking about each grade with its frequencies and percentages of the four English language skills according to 4Cs'. The second is to clarify the frequencies and percentages of each skill in all grades according to 4Cs'.

The Third Question: Is there a balance in terms of the frequency of the different 21st century skills included in the four English language skills (listening, reading writing, speaking?

Table (4.5): Frequencies and percentages of the four English language skills according to 4Cs' for 5th grade

	Listening		Speaking		Reading		Writing		Total
	F.	**%**	**F.**	**%**	**F.**	**%**	**F.**	**%**	
Creativity	0	0%	0	0%	0	0%	72	100%	72
Critical thinking	36	14.3%	90	35.7%	108	42.8%	18	7.14%	252
Communication	54	28.7%	72	38.9%	8	4.25%	54	28.7%	188
Collaboration	0	0%	72	44.4%	18	11.1%	72	44.4%	162

Figure (4.5) shows the percentages of the four English language skills according to 4Cs' for 5th grade

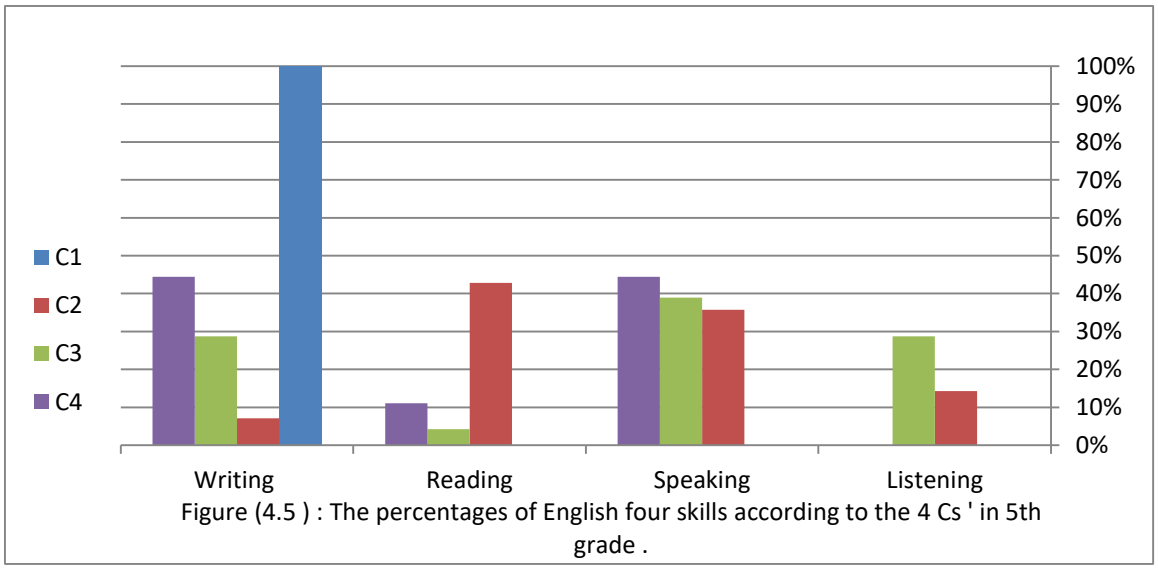

Figure (4.5) : The percentages of English four skills according to the 4 Cs ' in 5th grade .

As it can be seen from table (4.5) above, the most frequent skill in presenting C1 creativity in the 5th grade curriculum is writing which scores 100%. Whereas listening, speaking and reading have (0 frequencies).

In addition, it reveals that the most frequent skill in presenting C2 (critical thinking) in the 5th grade content is reading which scores (108 frequencies) and presents 42.85%. while the least frequent skill is writing which scores (18 frequencies) and represents 7.14%.

Moreover, it shows that the most frequent skill in presenting C3 (communication) in the 5th grade is speaking which scores (72 frequencies) and represents 38.9%. Whereas the least frequent skill is reading, which scores (8 frequencies) and represents 4.25%.

Finally, it reveals that the most frequent skill in presenting C4 (collaboration) in the 5th grade is writing and speaking which score (72 frequencies) for both and represent 44.4%. However, the least frequent skill is listening which scores (0frequencies) and represents 0%.

Table (4.6): Frequencies and percentages of the four English language skills according to 4Cs' for 7th grade

	Listening		Speaking		Reading		Writing		Total
	F.	%	F.	%	F.	%	F.	%	
Creativity	18	33.3%	18	33.3%	0	0%	18	33.3%	54
Critical thinking	108	37.5%	18	6.25%	36	12.5%	126	43.75%	324
Communication	90	20.64%	166	38.0%	18	4.12%	162	37.15%	436
Collaboration	36	20%	90	50%	18	10%	36	20%	180

Figure (4.6) shows the percentages of the four English language skills according to 4Cs' for 7th grade

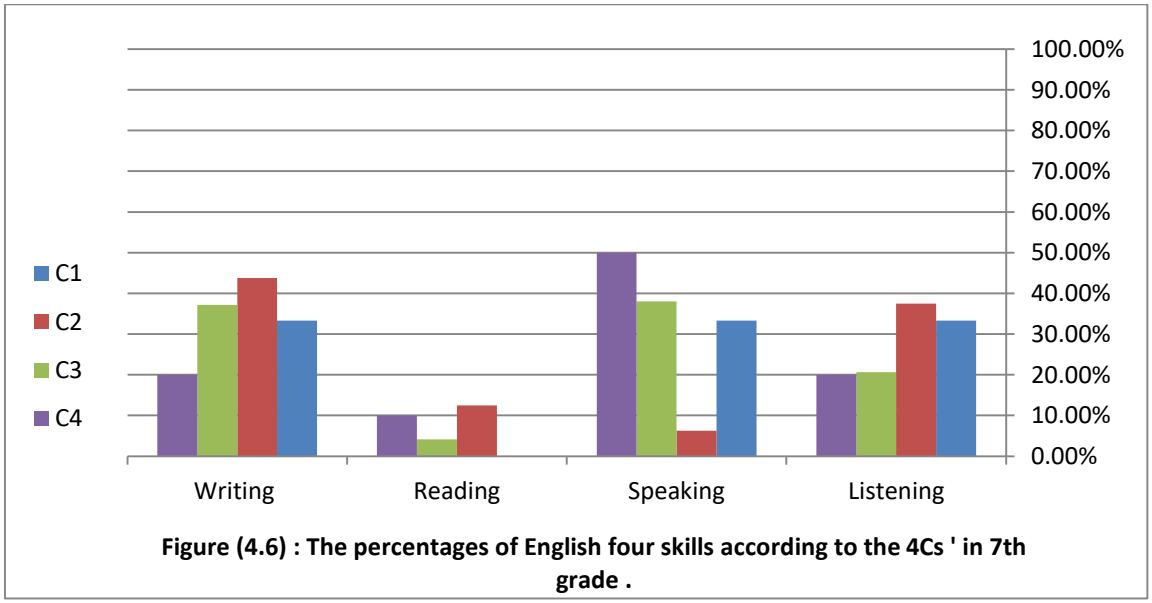

Figure (4.6) : The percentages of English four skills according to the 4Cs ' in 7th grade .

Table (4.6) above shows that listening, speaking and writing have the same frequencies and percentages in presenting C1 (creativity) in the 7th grade content which is 33.3% for all while it is noticed that the least frequent skill is reading with 0 frequency.

In addition, it shows that the most frequent skill in presenting C2 (critical thinking) in the 7th grade is writing which scores (126 frequencies) and represents 43.75%. Howeve, the least frequent skill is speaking which scores (18 frequencies) and represents 6.25%.

Moreover, it clarifies that the most frequent skill in presenting C3 (communication) in the 7th grade is speaking which scores (166 frequencies) and represents 38.0%. Whereas the least frequent skill is reading which scores (18 frequencies) and represents 4.12%.

Finally, it reveals that the most frequent skill in presenting C4 (collaboration) in the 7th grade is speaking which scores (90 frequencies) and represent 50%. However, the least frequent skill is reading which scores (18 frequencies) and represents 10%.

Table (4.7): Frequencies and percentages of the four English language skills according to 4Cs' for 9th grade

	Listening		Speaking		Reading		Writing		Total
	F.	%	F.	%	F.	%	F.	%	
Creativity	0	0%	28	66.6%	0	0%	14	33.3%	42
Critical thinking	0	0%	28	33.3%	28	33.3%	28	33.3%	84
Communication	56	28.4%	56	28.4%	29	14.7%	56	28.4%	197
Collaboration	0	0%	64	56.14%	14	12.28%	36	31.57%	114

Figure (4.7) shows the percentages of the four English language skills according to 4Cs' for 9th grade

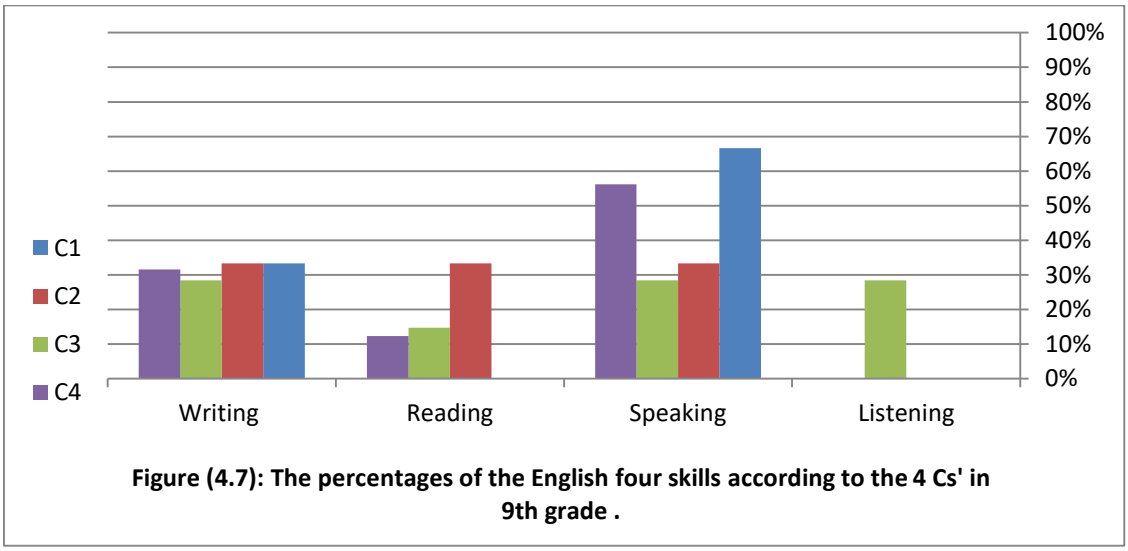

Figure (4.7): The percentages of the English four skills according to the 4 Cs' in 9th grade .

Table (4.7) reveals that the most frequent skill in presenting C1 creativity in the 9th grade content is speaking which scores 66.6% with 28 frequencies. Whereas listening and reading have (0 frequencies).

Moreover, it shows that speaking, reading and writing have the same percentage in presenting C2 (critical thinking) with (28 frequencies) frequencies for each and 33.3%. However, the least frequent skill is listening which scores (0 frequencies).

In addition, it clarifies that listening, reading and writing have the same percentage in presenting C3 (communication) in the 9th grade with (56 frequencies) and 28.4% for each. Whereas the least frequent skill is reading which scores (29 frequencies) and represents 14.7%?

Finally, it reveals that the most frequent skill in presenting C4 (collaboration) is speaking which scores (64 frequencies) and 56.14%. However, the least frequent skill is listening which scores (0frequencies).

Table (4.8): Frequencies and percentages of listening skill according to 4Cs' for 5th, 7th and 9th grades

5th grade		7th grade		9th grade	
Frequencies	**Percentage**	**Frequencies**	**Percentage**	**Frequencies**	**Percentage**
90	22.61%	252	63.31%	56	14.67%

Figure (4.8) clarifies the percentages of listening skill according to 4Cs' for 5th, 7th and 9th grades

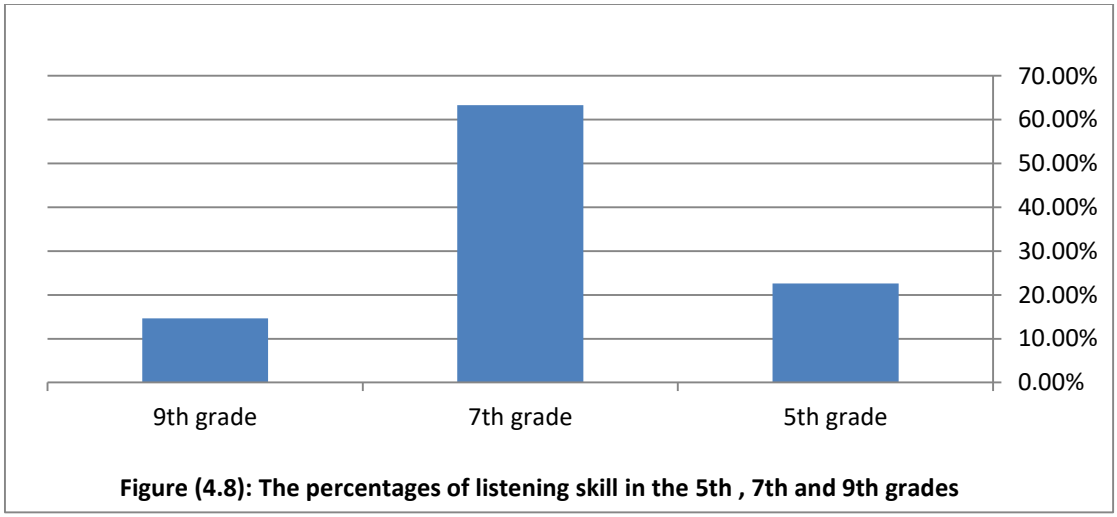

Figure (4.8): The percentages of listening skill in the 5th , 7th and 9th grades

As it can be seen from table (4.8) above, listening skill in the 7th grade has the highest frequency with 252 frequencies and 63.31% of listening average presentation in upper stage curriculums. Whereas the least frequent grade rates are 9th grade with 56 frequencies and 14.67%.

Table (4.9): Frequencies and percentages of speaking skill according to 4Cs' for 5th, 7th and 9th grades

5th grade		7th grade		9th grade	
Frequencies	**Percentage**	**Frequencies**	**Percentage**	**Frequencies**	**Percentage**
234	33.2%	294	41.76%	176	25%

Figure (4.9) shows percentages of speaking skill according to 4Cs' for 5th, 7th and 9th grades.

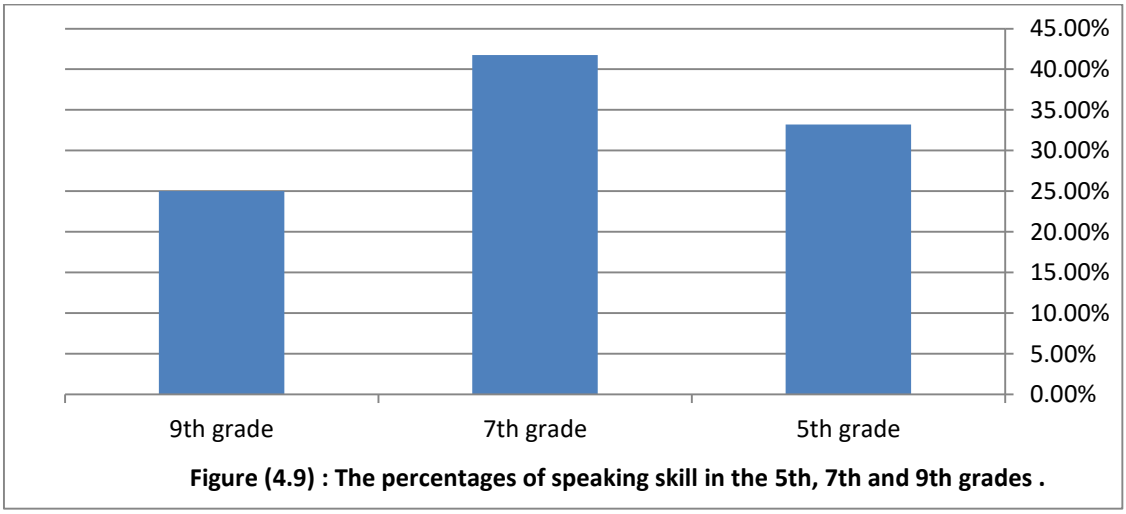

Figure (4.9) : The percentages of speaking skill in the 5th, 7th and 9th grades .

Table (4.9) and figure (4.9) reveal that speaking skill in the 7th grade has the highest frequency with 294 frequencies and 41.76% of speaking skill presentation in upper stage English for Palestine curriculum. Whereas the least frequent grade rates are the 9th grade with 176 frequencies and 25%.

Table (4.10): Frequencies and percentages of reading skill according to 4Cs' for 5th, 7th and 9th grades

5th grade		7th grade		9th grade	
Frequencies	**Percentage**	**Frequencies**	**Percentage**	**Frequencies**	**Percentage**
134	48.37%	72	25.99%	71	25.63%

Figure (4.10) shows the percentages of reading skill according to 4Cs' for 5th, 7th and 9th grades.

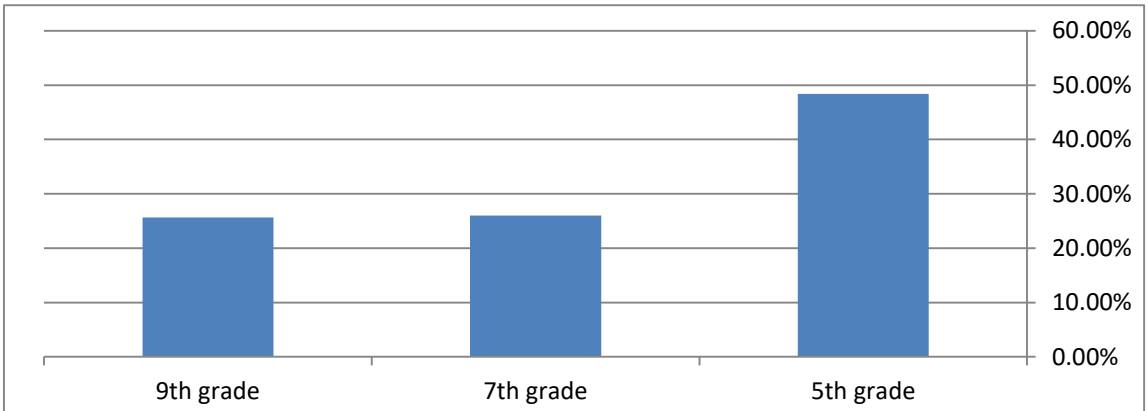

Figure (4.10) The percentages of reading skill in the 5th, 7th and 9th grades .

Table (4.10) and figure (4.10) above reveal that reading skill in the 5th grade has the highest frequency with 134 frequencies and 48.37% of reading skill presentation in upper stage English for Palestine curriculum. However, the least frequent grade is the 9th grade with 71 frequencies and 25.63%. Moreover, it is only one difference less than 7th grade which means that 7th is 72 frequencies.

Table (4.11): Frequencies and percentages of writing skill according to 4Cs' for 5th, 7th and 9th grades

5th grade		7th grade		9th grade	
Frequencies	**Percentage**	**Frequencies**	**Percentage**	**Frequencies**	**Percentage**
216	32.33%	340	50.89%	112	16.76%

Figure (4.11) shows the percentages of writing skill according to 4Cs' for 5th, 7th and 9th grades

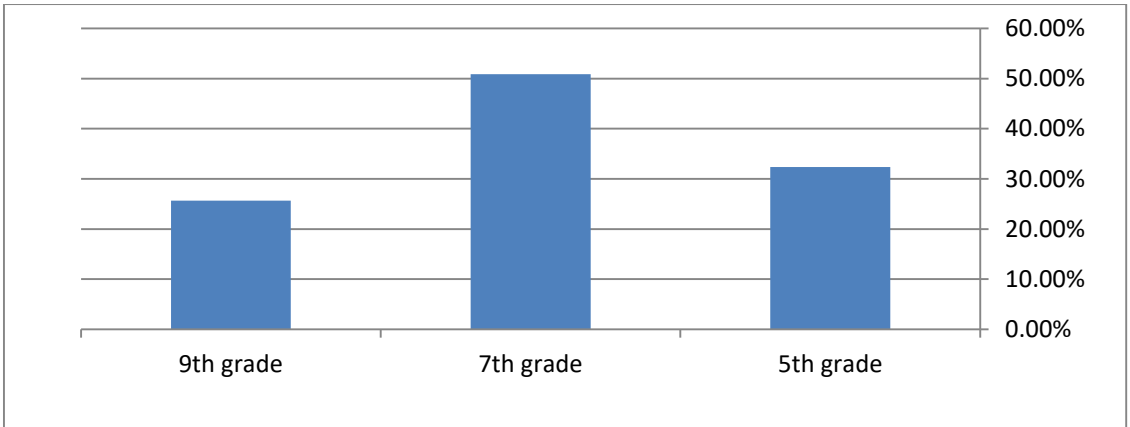

Figure (4.11) The percentages of writing skill in the 5th, 7th and 9th grades .

As it can be seen from table (4.11) above, writing skill in the 7th grade has the highest frequency with 340 frequencies and 50.89% of writing presentation English for Palestine upper stage curriculum. However, the least frequent grade rates are the 9th grade with 112 frequencies and 16.76%.

Table (4.12): Frequencies and percentages of English four skills according to 4Cs' for 5th, 7th and 9th grades

Listening		Speaking		Reading		Writing	
Frequencies	**Percentage**	**Frequencies**	**Percentage**	**Frequencies**	**Percentage**	**Frequencies**	**Percentage**
398	19.44%	704	34.39%	277	13.53%	668	32.63%

Figure (4.12) shows the percentages of English four skills according to 4Cs' for 5th, 7th and 9th grades.

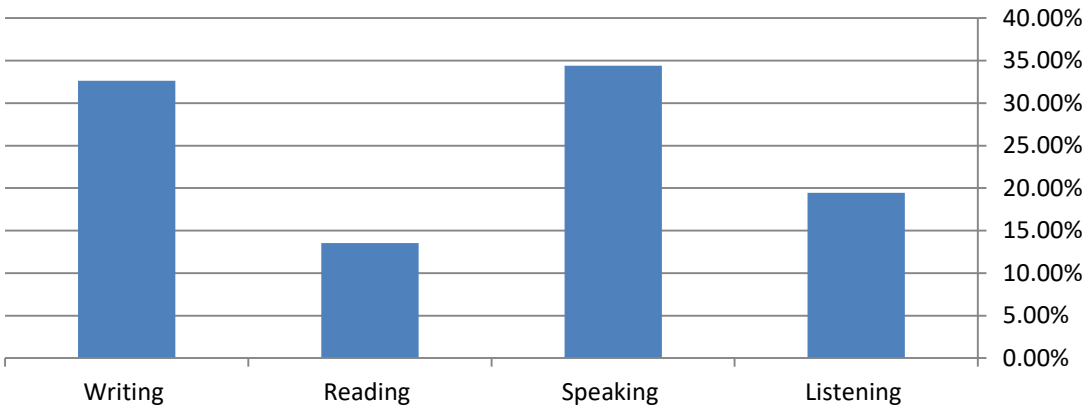

Figure (4.12) : The percentages of English 4 skills .

Table (4.12) shows the frequencies and percentages of English four skills according to 4Cs' for 5th, 7th and 9th grades. It reveals that speaking has the highest frequent skill with 704 and 34.39%. However, the least frequent skill is reading (277 frequencies) and 13.53%. The second highest presented skill is writing since it has (668 frequencies) and represents 32.63%. However, listening has the third rank with (398 frequencies) and 19.44%.

4.2.4 Results Related to the Fourth Question

The Fourth Question: Are there differences between the frequencies of the 21st century skills according to the grade (5th, 7th and 9th)?

To answer this question, the researcher converted the fourth question into a null hypothesis which is

4.2.4.1 Null Hypothesis:

" There are no statistically significant differences at the indication level ($\alpha \leq 0.05$) between frequencies' average of 21st century skills according to the grade (5th, 7th and 9th) ".

Table (4.13): Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	**44.428[a]**	**6**	**0.001**

Table (4.13) shows the value of the Chi – Squrare test and the value of the statistical significance.

The results in Table (4. 13) indicate that the value of the significance level is (0.001) and this value is less than the value of the significance level specified for the study ($\alpha \leq 0.05$) and therefore the null hypothesis was rejected, which means that there are statistically significant differences at the level of statistical significance ($\alpha \leq 0.05$) between the frequencies of twenty-first century skills depending on the grade variable. That is, there are differences and to know the differences in favor of those who referred to the following Figure, where it was found that the differences in all rows are in favor of a skill (Communication) because it got the highest percentage and frequencies.

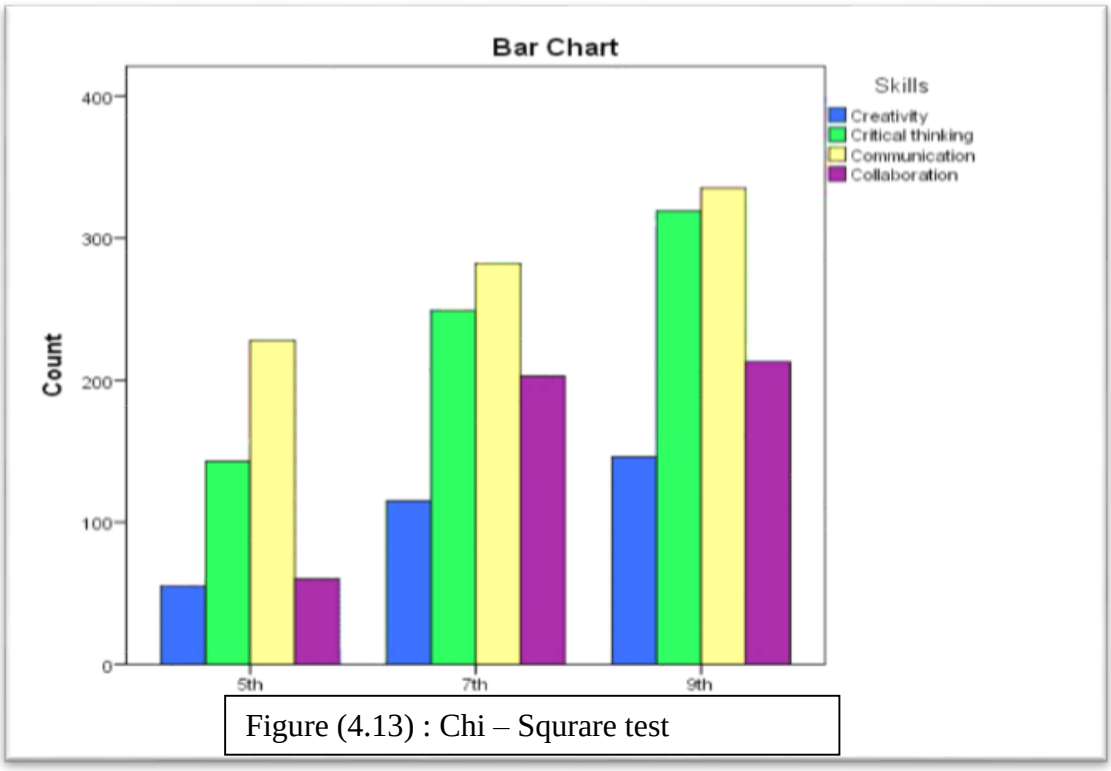

Figure (4.13) : Chi – Squrare test

Chapter Five

Discussion, Conclusions, and Recommendations

5.1 Introduction

This chapter discusses the interpretation of the statistically analyzed data of the study questions presented in chapter four. It also seeks to interpret the findings in the light of the literature review to find out about the inclusion of the 21st century skills in English for Palestine textbooks for the upper basic stage.

Based on the study results, this chapter includes some suggestions and recommendations that are expected to be beneficial in the future.

Below is a presentation of the discussion of the results based on the order of the study questions.

5.2 Discussion of the Results of the First Question:

The First Question: What are the frequencies of 21st century skills in the English Palestinian textbooks for the upper primery stage?

The results showed that communication is the highest frequent skill among the four Cs in the upper basic stage whereas the least frequent C is creativity. The reason for this may be that language is most effectively acquired when it is employed in relevant and meaningful settings where learners engage with others to achieve their goals. This calls for providing FL learners with numerous opportunities to connect with people, use English, and study meaningfully and intellectually challenging content and that is matching steadily with the communicative approach that our curriculum was built on. Moreover, it is one of the most important objectives that our Palestinian curriculum seek to achieve according to General Administration of Curricula (2015) which confirms that language acquisition occurs through meaningful use and interaction that requires engagement with others, expressing their ideas

and emotions, feelings and ideas about such situations through verbal, written and audio communications in different environments and multiple circumstances.

Other purpose may be because of a blind knowledge deficiency of the 21st skills and the two matrixes during the preparation of the English language curriculum, and the great law to complete the curriculum that has led to the neglect of such skills. In contrast to the reference document of the curriculum, the Palestinian community called for keeping up with the knowledge revolution and the world's rich and global resources in various fields. It has made the learner who possesses knowledge, skills, trends and values one of the most important pillars of the educational curriculum. In addition, it called for the development of his/her interests and preparations towards innovation and creativity, and openness to World culture is far from being closed with pride in its national identity and Arab-peaceful culture, and respect for other religions and cultures. However, the tasks of the Palestinian textbooks don't reflect this vision, and that was obvious through the results. The focus shifts from the high order thinking skills into communication as it's the approach to the design of our curriculum

This result agrees with Amer and Khataybeh (2022) since effective communication has the highest percentage in their study. Rinekso, A. B. (2021) found that communication and collaboration were the most dominant skills. It agrees also with AL- Faheed (2021) who found that communication and collaboration skills presents 32.28%, the critical thinking and problem solving percentages represented (31.73 %) in the highest rank compared with other skills, such as creativity 5.86%

However, this result doesn't agree with Dahlan (2020) who found that the skills of critical thinking and problems solving came at the top with a percentage of 22.2 %, while creativity and innovation skills received the sixth place with 9.6 %. Besides to Al-Shahary (2021) who assessed that the most included skill was critical thinking and problem - solving with (50 %) and has the top rank, creativity and Innovation with (4 %) which came at the second final place. Moreover, Al-Harby M. and Al-Harby N. (2021) proved that critical thinking and problem solving in the mathematics book for the second intermediate grade was (87.48%) with a high degree of inclusion, the creative thinking skill came with a moderate level of availability; however, the percentage of communication skill represented (29.93 %) with a low degree of inclusion.

Generally speaking, there are many studies that showed limited inclusion of the 21st century skills. Al-Harby (2019), Khaldi and Kishek (2020) found the existing curricula represent

the skills for the 21st twenty-first century poorly, with low focus and insufficient attention on the majority of the skills studied. In addition, Al-Mughrabi (2021) findings revealed that the degree of inclusion for the 21st century textbook was low, with none of reaching more than 40%. In contrast with AL- Muqren (2021) whose results indicated that learning and innovation skills were the most fortunate to be included.

5.3 Discussion of the Results of the Second Question:

The Second Question: Are the frequencies of the 21st century skills graded according to the textbook level?

The result of the second question showed that the frequencies are not graded according to the textbook level or units. It is critical for TEFL teachers and curriculum to assess their students' language so that they can enhance their listening comprehension and help maintain a broad understanding of their students. As a teacher of a lower-level language, it is essential to develop the writing skills required for grade-level writing. Languages that are graded are those that grow at the learner level as a result of classroom assessment. It can be compared to actual language when supplied with a comparison. Students need to be graded because that gives them the ability to comprehend what they understand, what they don't understand, and what improvement is needed is another advantage of grade evaluation. Additionally, a graded course gives learners data that might be used as a guide for future decisions regarding the way they teach. The researcher attributes the reason for this to the flaw in the design of the English curriculum in a way that achieves the sequence and scope matrix. This contrasted Ausobel who sees that the most general ideas of a subject should be presented first and then progressively differentiated in terms of detail and specificity. Following this way will lead to meaningful learning. Moreover, she noticed that the content focuses on the knowledge quantity more than quality. She supposes that the reason behind the low degrees in English achievement tests and general weakness in English as a subject at school through her experience as a teacher. Students deal with each unit separately without making any connection with units or skills that they had learnt in each one. As a result, they don’t use their previous skills to develop new ones. According to the guidelines of English Language Curriculum for Public Schools in Palestine (2015), our English textbooks are designed depending on the spiral curriculum, which follows the cognitive theory; however, this design

focuses only on the content material that adds new vocabulary at the same zone in each class with more new ones only. The whole educational process turns around into memorization and understanding; it neglects skills like high order thinking skills for example. Moreover, the general objectives at this stage focus on communication and collaboration more than creativity or problem solving and critical thinking. However, this contrasts the objectives of higher stage (11-12) grades, which have a big confirmation on high-order thinking skills like analysis, problem-solving, inferencing, synthesizing and information integration skills. This may be the reason behind the graded frequencies' in the ninth grade, which prepares students to the higher stage. Following content analysis, it has been noticed that the 9th grade textbooks tasks offer students a wider special zone to express their thoughts. This is compared with the 5th and 7th grades, whose tasks focus on communicating, collaborating and being part of team and the big community later. The actual content of the English Syllabus reflects and fulfills the general goals and objectives outlined in the curriculum. The grading of the content themes is supposed to be guided by the principles of the students' psychological, cognitive, moral, and social development. The topics should progress from those that appeal to children to those that appeal to teenagers.

The 21st century skills matrix is a unique comprehensive integrated system, which is concerned with with objectives, content, teacher practices and methodology, students-centered approach, assessment and environment. There is a gap between what it should be and what is really done. As a result, many units within textbooks do not have any creative thinking integration in lower stages; therefore, students' focus on grades rather than on skills; in addition to the absence of skill-based assessment methods. All of these practices prevent the implementation of the p21st century skills.

None of the studies agrees with this result because this study is the first of its kind to deal with the gradient of skills in class/classes. However, other studies aimed at estimating the degree of availability of the the 21st century skill in the textbooks. On the other hand, the other studies strongly recommended taking into consideration the inclusion of the 21st century skills in clear and accurate progression like Al Faheed (2021).

5.4 Discussion of the Results of the Third Question:

The Third Question: Is there a balance in terms of the frequency of the different 21st century skills included in the four English language skills (listening, reading writing, speaking)?

The result of the question showed that the writing is the most dominant skill in presenting creativity; however, the other three skills have no frequencies which mean that creative thinking is used only in writing. While reading is the most frequent in presenting critical thinking skill, writing has the least frequent skill. This coincides with speaking that comes second and listening that secures the third place. Speaking is the most dominant in the representation of collaboration and communication skills in the 5th grade, while reading is the least frequent in presenting reading, writing and speaking have the same rank in presenting communication. However, in collaboration presentation, writing and speaking come in the second place where listening has no frequencies in the 5th grade.

In the 7th grade, the presentation percentages are different. For example, creativity has equal percentages in reading, speaking and writing, since it has no frequencies in listening as a skill. The most dominant skill in presenting critical thinking is writing, listening comes in the second rank, reading is in the third, while the least frequent skill is speaking. In communication presentation, the skill of speaking has the highest percentages, writing and listening have the same presentation rates. However, reading comes in the final place. Speaking has the first place in collaboration rates, writing and listening come in the second place whereas reading has the final place.

The most dominant skill in presenting creativity is speaking in the 9th grade incontrast with the 5th grade, writing comes in the second place, and listening and reading are in the third place. In critical thinking rates, speaking, reading and writing have equal representation ratio, while listening has no frequencies. Writing, listening and speaking have equal representation ratio, since reading scores the least frequent skill in presenting communication. Speaking is the most dominant skill since it represents more than 50% of the representation rate of collaboration as the 21st century skills. Writing comes in the second rank, reading in the third and listening is in the final.

The results of the third question also showed that speaking is the most dominant skill in the presentation of the 21st century skill in the *English for Palestine* textbooks for upper stage, writing comes in the second place, listening comes in the third and reading comes in the final.

If the researcher addresses more specificity about each skill on its own, then listening has the highest frequencies in the 7th grade, 5th grade comes in the second place while 9th in the third. In speaking, the 5th grade comes in the first place, then 7th followed by the 9th which comes last. The 5th grade also has the highest percentages in reading skill presentation, while the 7th and the 9th have nearly the same percentages. The 7th grade is characterized by the fact that it occupies half of the representation of writing skill among the classes dealt with by the study, while the the 5th grade comes in second place compared to the the 9th grade, which occupies the last place in representing the skills of the four English skills.

The major goal of writing in English is to communicate with others in a variety of circumstances, and this requires both high order thinking skills and communicative abilities. In addition, writing gives students a space to express their feelings and ideas. It emerges through the creation of memos, letters, journals, ads, and directions, and all of this would enable students to express their inner abilities and things on their minds. This means that every student has his/her own way of expressing written ideas and none may meet or be similar due to the nature of human psychology and the characteristics of individual differences that embody creativity in its authentic meaning depending on the expression of each student the same idea or image in his/her own vocabulary and independent point of view. This property cannot be found in reading or listening or even speaking because all of these skills are systematic in our *English for Palestine* textbook and the tasks have the same form in each unit. The same purpose which is at its most application except writing which give students a space to express. According to the English for Palestine guidelines, speaking represents 11% in application level, Reading is 5%, and writing is 22% since listening is 0 %.

Moreover, the textbook show other styles of writing, such as using different discourse modes to describe people, places, events, customs and situations, objects, and images, which are also possible in the *English for Palestine*. Additionally, it employs it for a number of purposes, such as converting data from a graphic to an expository format, and to communicate one's thoughts, feelings, and ideas on a variety of subjects. The main goal of

teaching writing cannot be achieved if creativity is not achieved as a prerequisite because the purpose of teaching writing skills is to get pupils ready to showcase their work.

In the reading skill, the case is different, because in each unit, we have a post-activity that aims at giving students a chance to judge, take decision on an issue after proper evaluation of evidences, claims, arguments, criticize a passage, give a title or evaluate a situation from their point of view. This would raise the opportunity to practice the skills of high order thinking, such as critical thinking through reading passages because students have to analyze and evaluate various perspectives, make correlation between various types of available data, interpret the current data and form conclusions after effective analysis, reflect the pros and cons of experiences to solve problems, identify and ask relevant and vital questions to bring forth various perspectives and for getting better solutions.

Actually, the four English skills relate to each other, as the student cannot express his/her opinion and evaluate the case or choose between two characters without using speaking or writing through reading the texts.

The main objective of teaching and learning listening and speaking skills is to prepare students to interact successfully with native and non-native English speakers in a wide range of social and academic settings. This would lead to giving them the first place in presenting communication and collaboration since a student needs to be a part of a team or a pair to intact or to affect others. The goal of speaking is not to produce a near-native pronunciation, but rather one that an educated English speaker who can understand, and recognize the messages of others. Likewise, the goal of listening is not to listen for repetition purposes, but to listen and understand verbal directions and respond to learn something new through face-to-face communication, phone conversations, telecasts and video or recorded speech.

As our curriculum depends on cognitive approach, the degree of creativity presentation in the 7^{th} grade is rising in presenting the four English skills because it uses the previous experience to build the new one. At this stage, the student is given much space to write about his/her evaluations, judgments and decisions more than in the 5^{th} grade after being restricted to the evaluation og what they read. This supports the idea of the spiral curriculum and skills integration to form student knowledge and language competence. Speaking and listening have always the same goal in all stages with keeping on the graded of themes, topics and passages support the content.

The 9th grade is considered a preparation level to secondary stage. The results showed approximately equal percentages in the four skills distribution. At this stage, content tasks in general become wider than in the 5th and the 7th grades. They give the student the chance to be more responsible and adopt his/her opinion through the situation and cases shown in the textbook. However, as a teacher who teaches these classes, the researcher believes that there still a need for more chances to be employed in real and authentic situations. the researcher thinks that students at this age are capable to do projects, design their knowledge through blogs, videos, games and infographic cartoon. Students would be able to rely on themselves more in creating and practicing their own language. The content analysis showed these feathers though the distribution of the English skills according the 4Cs'.

By returning to the English language skills arrangement, we emphasize the first reference point, which states that our curriculum follows the communicative approach. Thus, speaking comes in the first place, followed by by writing, then listening and writing. This means that we speak to write and listen to learn how to read.

5.5 Discussion of the Results of the Fourth Question:

The Fourth Question: Are there differences between the frequencies of the 21st century skills according to the grade (5th, 7th and 9th)?

The result shows there are statistically significant differences at the level of statistical significance ($\alpha \leq 0.05$) between the frequencies of twenty-first century skills depending on the grade variable in in favor of of 9th grade.

The researcher attributes the reason for this to the disharmony between the the basics of curriculum development and the textbooks that are taught for students. Textbooks are not contacting or graded. In addition, the researcher sees that 9th grade has the most frequent grade according to the 4 Cs' beacause of the developmental charactrestics' of the period that learners go through compared to the lower grades. At this age, learners have to be independent and their new roles as a teengers enhance this attitude. So the textbooks have to develop this trend.

Communication skill has the highest frequencies in the three grades. That because our curriculum focuses on being part of a team and commuinacating with others as the researcher mentioned before.

5.6 Recommendations

In the light of the results of this study, the researcher suggests the following recommendations.

Ministry of Education

1. It is suggested that the Ministry of Education keeps pace with the developments of the 21st century and work on the development of books accordingly.
2. It is suggested that the Ministry of Education should prepare and qualify teachers about the 21st century skills through workshops. Workshops should be arranged to examine teachers' awareness about the 21st century skills.

Textbooks Design Centers and Decision Makers

3. It is advised to distribute the 4Cs' domains equitably. Equilibrium does not imply distributing things equally, but rather in accordance with the standards of a scale that is in balance. To keep up with global advancement, the researcher suggests increasing the tasks that require high order thinking, such as creative and critical thinking. Therefore, students can practice their knowledge and use it effectively.
4. It is suggested to order the 4C's in each textbook according to the grades, as graded language is frequently used in textbooks as part of teaching process to develop student's ability and build their foreign language especially in EFL classes.

5. Designers of the curriculum are suggested to trend towards the practices of the authentic assessment instead of just having the tests. They also need to enrich the curriculum with activities that stimulate creative thinking skills and critical thinking where low levels of repetition were observed in the content analysis of English for Palestine.

Teachers

6. The most important factor is the way teachers implement the content tasks. They should employ team work, pair work, listening and speaking tasks in the accurate and suitable technique to ensure that students have learnt effectively.

7. Teachers are advised to diversify their methods that stimulate their students' creative and critical skills and work, and to shape their characters and cognitive orientations towards life and society.

Future studies

8. This study's theoretical foundation is based on the international models for categorizing 4Cs'. The researcher advises tackling the development of the aforementioned concepts and their use in the Palestinian textbooks. The possibility of conducting research that might introduce different insights.
9. Future studies may address the topic of gradient skills and their impact on the comprehensive understanding of the four language skills and student's performance.
10. The researcher suggests that future studies address the impact of applying these 21st century skills on students' development in English skills.

5.7 Conclusion

Although our curriculums are designed to fit the 21st century skills and fulfil the needs of 21st educator according to General Administration of Curricula (2015), it still has a limited inclusion, insufficient and unbalanced 21st century skills. There are a few key procedures to take into account to significantly alter the level of the *English for Palestine* for upper primary stage. First, instead of just concentrating on the four language skills listed in the textbook, the textbook should incorporate all of the 21st century skills. Additionally, the current skills need to be rebuilt so that both instructors and students may use them in their particular contexts of time and social interaction. Moreover, the educational system must be extended and progressive not only in terms of new vocabulary, but also on the basis of integration, sequence and scope, which achieves the cognitive, emotional integration of the learner. In turn, this would lead to achieve the concept of a 21st century educator.

References

Al- Deiri, Z. (2019). **The Level of Life Skills Experience of High School Teachers in Jordan from Their Perspectives**. Unpublished Master's Thesis, Al-Albayt University.

Al – Faheed, A. (2021) Evaluating the educational activities of Arabic language course for the third grade in the light of 21st century skills. **Journal of Educational Faculty.** Asyut University. Vol (37). Iss (5). Egypt

Al-Harby, I. (2019) **The Extent to Which the 21st Century Skills Are Included in the Mathematics**. Faculty of Education - Um Al-Qura University. Saudi Arabia.

Al Harby, M. & Al-Harby, N. (2021) **Including the twenty-first century skills in mathematics book for the second intermediate grade in the Kingdom of Saudi Arabia, in light of the mutual dimensions of the Education and Training Evaluation Commission**. Vol (4), Iss (1). pp (447 – 495) Estonia

Al Jar, Th. (2021). The Inclusion of Life Skills in Secondary School English Textbooks in Saudi Arabia. **Journal of Human and Sciences**. Vol (8), pp.182-203.

Al Jurani, A. & AL Khalidi, T. (2021) Analysis of the content of the applied fifth grade chemistry book according to life skills. **Turkish Journal of Computer and Mathematics Education.** Vol. (12) Iss (.13), Pp. (6535 – 6554)

Al Khalyla, A. (2021) **The Degree of Including the 21st Century Skills in the 9th Basic Grade Chemistry Textbook in Jordan**. AL Albayt University, Jordan.

Al-Khlan, Th. (2021). Life skills incorporated in the Sharia Sciences Courses at The Elementary Stage in Saudi Arabia, **Journal of Arts & Humanities**. Vol (9) , Iss (3), pp (1-13)

Al-Mughrabi, A. (2021) **Inclusion of 21st Century Skills in Biology Textbook for the ninth grade**, Ilkogretim Online - Elementary Education Online, Vol (20), (Issue 5): pp. (1959-1969). Middle East University, Amman, Jordan

Al – Muqren, I. (2020) The Extent to Which Middle School Art Education Textbooks Include Skills for the Twenty-First Century in the Kingdom of Saudi Arabia. **Journal**

of Educational science. Emam Mohammad Bin Saud Islamic University, Saudi Arabia

Al-Qahtani, M., & Mohammad, H. (2015). Mobile applications' impact on students' performance and satisfaction. TOJET: **The Turkish Online Journal of Educational Technology**, Vol. (14) Iss. (4), pp. (102-112).

Al- Saud, J. (2021)**.** Faculty Members ' Viewpoints of the Necessary Twenty –First Century Skill and Acquisition Requirements for Kindergarten Children at Colleges of Education for Childhood. **International Journal of Research and Education.** Vol (45). Iss (2) Article (2). Kingdom of Saudi Arabia.

Al Sayel, H. (2021). **Content Analysis of the English Textbooks for the Fifth Grade in Light of Life Skills: A Comparative Study between Jordan and Finland, Master thesis,** Middle East University, Amman, Jordan.

Al-Shahri, A. (2021) Level of inclusion of 21st century skills in school textbooks Middle School. **Journal of Educational Sciences.** King Saud University – Faculty of Education. Vol (33). Iss (2). pp (307-333). Kingdom of Saudi Arabia.

Al-Shammari, W. (2020) The degree of availability of 21st century skills in the physics course for the first grade of secondary school: Analytical study **Faculty of Education Magazine.** Vol (31) Iss (123) pp (435 - 470). Binha University. Egypt

Arabloo, P., Hemmati, F., Rouhi, A. & Khodabandeh, F. (2021). The Effect of Technology-aided Project-based English Learning on Critical Thinking and Problem Solving as Indices of 21st Century Learning. **Journal of Modern Research in English Language Studies,** Vol. (9). Iss (1), pp. (125-150) doi: 10.30479/jmrels.2020.14077.1730

Bakken, J, & Andersson-Bakken, E. (2021)**.** The textbook task as a genre. **Journal of Curriculum Studies.** 53:6, 729-748, DOI: 10.1080/00220272.2021.1929499

Bani Amer, M. & Al-Khataybeh, M. (2021). The Achievement of English Language Curricula for Secondary Stage from the Perspectives of EFL Teachers and Supervisors in Jordan. Language Literacy: **Journal of Linguistics, Literature and Language Teaching**, Vol (5) Iss. (1) pp. (36-47). https://doi.org/10.33258/biolae.v4i1.635

https://doi.org/10.33193/JEAHS.8.2021.205

Barrot, J. (2019) English Curriculum Reform in the Philippines: Issues and Challenges from a 21st Century Learning Perspective, **Journal of Language, Identity & Education**, Vol. (18) Iss. (3) pp. (145-160) , DOI: 10.1080/15348458.2018.1528547

Basal, A., Yilmaz, S., Tanriverdi, A., & Sari, L. (2016). **Effectiveness of mobile applications in vocabulary teaching. Contemporary Educational Technology,** Vol .(7) Iss (1), pp (47-59) . https://eric.ed.gov/?id=EJ1105763

Beers , S. (2020) **. Teaching 21st Century Skills: An ASCD Action Tool .**

Bohlin, L., Durwin, C. C., & Reese-Weber, M. (2009). Module 9. In L. Bohlin, C. C. Durwin, & M. Reese-Weber, EDPSYCH (pp. 161-174). New York: McGraw-Hill Higher Education.

Bohlin, L., Durwin, C. C., & Reese-Weber, M. (2009). Cognitive development. In L. Bohlin, C. C. Durwin, & M. Reese-Weber, EdPsych: modules (pp. 119-130). New York: McGraw-Hill Higher Education.

Bohlin, L., Durwin, C. C., & Reese-Weber, M. (2009). Critical Thinking and Problem Solving. In L. Bohlin, C. C. Durwin, & M. Reese-Weber, EdPsych: modules (pp. 243-257). New York: McGraw-Hill Higher Education

Bohlin, L., Durwin, C. C., & Reese-Weber, M. (2009). Social Cognitive Theory. In L. Bohlin, C. C. Durwin, & M. Reese-Weber, EdPsych: modules (pp. 175-183). New York: McGraw-Hill Higher Education.

Bohlin, L., Durwin, C., & Reese-Weber, M. (2009). **Metacognition**. In L. Bohlin, C. C. Durwin, & M. Reese-Weber, EdPsych: modules (pp. 215-226). New York: McGraw-Hill Higher Education.

Bohlin, L., Durwin, C. C., & Reese-Weber, M. (2009). **Module 9.** In L. Bohlin, C. C. Durwin, & M. Reese-Weber, EDPSYCH (pp. 161-174). New York: McGraw-Hill Higher Education.

Buckle, J. (2022). AComprehensive Guide to 21st Century Skills. https://www.panoramaed.com/blog/comprehensive-guide-21st-century-skills

Chalkiadaki . A , (2018) , A Systematic Literature Review of 21st Century Skills and Competencies in Primary Education. **International Journal of Instruction** .Vol. (11) , Iss (3) Autonomous University of Barcelona, Spain

Chiruguru, S. (2020). **The essential skills of 21st century classroom (4Cs). Researchgate,** pp (1-14) . doi:10.13140/RG.2.2.36190.59201

Chu, S. Reynolds, R. Tavares, N. Notari, M & Lee, C. (2017). **21st Century Skills Development Through Inquiry-Based Learning from Theory to Practice.** (pp. 17-32) Library of Congress, Gateway East, Springer, Singapore

Delors, J. (1996) **Learning: The treasure within**. UNESCO. Paris: UNESCO. Retrieved May 11, 2015 from http://unesdoc.unesco.org/images/0010/001095/109590eo.pdf

Dianawati, H. & Mulyono, H. (2016). Facilitating students' creativity in an EFL writing classroom: Voices from the field. **Argentinian Journal of Applied Linguistics.** Vol. 4, Iss (2), pp. (39-47). http://www.faapi.org.ar/ajal/issues/402/MulyonoAJALVol4(2).pd

Drake, M., & Reid, L. (2018). Integrated curriculum as an effective way to teach 21st century capabilities. **Asia Pacific Journal of Educational Research,** vo1(1), pp (31-50).

Dahlan, O. (2020) 21st Century Skills Included in Arabic Language Textbooks for Higher Basic Education in Palestine. **Journal of Al-Quds Open University for Educational & Psychological Research & Studies**. Vol (11). Iss (32). Palestine

Eddles-Hirsch, K., Kennedy-Clark, S., & Francis, T. (2020). **Developing creativity through authentic programming in the inclusive classroom Education**. Vol (3–13), Iss. 48(8), pp (909–91)

Erdem, C. (2019). 21st century skills and education. Cambridge: **Cambridge Scholars Publishing.**

Esen, M. (2021) Critical Thinking and Intercultural Competence: Review, Use, and Classification of the 21st Century Skills in Intercultural EFL Education. **International Journal of English Language Teaching** Vol. (8), Iss (. 1) ; İstanbul, Turkey : https://doi.org/10.5430/ijelt.v8n1p23

Farrah, M., & Abu-Dawood, A. (2018). **Using mobile phone applications in teaching and learning process.** Hebron University. Palestine

Fisser, P., & Thijs, A. (2015). Integration of 21st century skills into the curriculum of primary and secondary education. **In Society for Information Technology & Teacher Education International Conference**. Las Vegas, NV, United States.

General Administration of Curricula. (2015) **English Language Curriculum for Public Schools Grades 1-12.** Palestinian National Authority. Palestine

Halverson, A. (2018). **21st century skills and the" 4Cs" in the English language**

Hargie, O. (2019). **The Handbook of Communication Skills**, Fourth edition by Routledge, Abingdon, Oxon.

Hashemi, M., & Ghasemi, B. (2011). **Using mobile phones in language learning/teaching**

Hinton, J. (2021) **Educational Learning Theory for the 21st-Century. https://www.jeffreyahinton.com/post/educational-learning-theory-for-the-21st-century**

Islam, Sh; Stapa, B. & Rahman, M. (2021) Promises and Pitfalls of the Higher Secondary English Textbook of Bangladesh: A Critical Evaluation **MEXTESOL Journal,** vol (45) Iss (3). Mexico. https://eric.ed.gov/?id=EJ1310986

Johnson, D.; Johnson, R.& Smith, K. (2013). Cooperative Learning: Improving University Instruction by Basing Practice On Validated Theory. **Journal on Excellence in University Teaching** Retrieved from: http://personal.cege.umn.edu/~smith/docs/Johnson-Johnson-SmithCooperative_Learning-JECT-Small_Group_Learning-draft.pdf

Joynes, C., Rossignoli, S., & Fenyiwa Amonoo-Kuofi, E. (2019). **21st Century Skills: Evidence of issues in definition, demand and delivery for development contexts** (K4D Helpdesk Report). Brighton, UK: Institute of Development Studies.

Kamaruzaman, M. &Zainol, I. (2012) 'Behavior response among secondary school student's development towards mobile learning application', **Humanities**, **Science and Engineering** (CHUSER),

Karaki, S. (2016). **Evaluation of the Task–Based Learning in the Textbook English for Palestine–Ninth Grade at the Government and UNRWA Schools in Hebron District.** Hebron: Hebron University

Khaldi, M. & kishek, W. (2020) "The New Palestinian Science and Math Curricula in Light of the 21st Century Skills: A Critical and Enlightening Study," **International Journal for Research in Education**: Vol. (44) Iss. (3), Article 8.

Available at: https://scholarworks.uaeu.ac.ae/ijre/vol44/iss3/8

Limn, P. Siripipatthanakul, S. Phayaphrom, B. & Siripipattanakul, S., (2022) The Relationship Between Twenty-First-Century Learning Model (4Cs), Student Satisfaction and Student Performance-Effectiveness. **International Journal of Behavioral Analytics**, Vol (2) Iss (1), pp (1-18)

Meyer, W. & Norman, D. (2020). Changing Design Education for the 21st Century. **The Journal of Design, Economics, and Innovation**, Vol 6 Iss (1), pp (13–4)

Ni, S. Ni, P., Ni, A., Gede, D. & Zulidyana R. (2021**)** Problem-based learning and 21st-century skills: Are they compatible? **EduLite Journal of English Education, Literature, and Culture** Vol. (6), Iss. (2), pp. (326-340**)**

Nóra, F. (2021) Learning Organizations and Organizational Digital Competencies in the Field of Public Education. **New Horizons in Business and Management Studies,** pp (25-36).

https://e-journal.usd.ac.id/index.php/LLT/article/view/2655

Partnership for 21st Century Skills. (2008). **21st Century Skills. Education & Competitiveness: A Resources and Policy Guide**. [Online]. Retrieved from: http://www.p21.org/storage/documents/

Paul, R. & Elder, L. (2008). The Miniature Guide to Critical Thinking Concepts and Tools, Foundation for Critical Thinking Press.

Pešikan, A. & Lalović, Z. (2017). **Education for life: key 21st century competencies in curricula in Montenegro-executive summary**. UNICEF Montenegro

Pongsakorn, L. Supaprawat, S. Bordin , P. Sutithep , S. (2022) The Relationship Between Twenty-First-Century Learning Model (4Cs), Student Satisfaction and Student Performance-Effectiveness . Asia eLearning Management Center, Singapore, Kasetsart University, Thailand

Rinekso, A. B. (2021). The Representation of 21st Century Skills in an Indonesian EFL Textbook. **LLT Journal**, Vol (24) Iss (1), pp (191-211).

https://www.criticalthinking.org/pages/defining-critical-thinking/766

Saleh, E. (2019). **4Cs in the EFL Classroom**. Universty Bulletin- Vol. (4)

Iss (21).

Saputra, S. & Abdulkarim, A. (2022) Analysis of Civics Textbooks in Framework of the 21st Century Learning. Universitas Pendidikan Indonesia. Advances in Social Science, **Education and Humanities Research**, vol (636). Indonesia

Scardamalia, M., Bransford, J., Komza, B., & Quellmalz, E. (2010). **Assessment and teaching of 21st century kkills**. doi:10.1007/978-94-007-2324-5_5

Segar , S .(2021) , https://www.experientiallearningdepot.com/experiential-learning-blog/teaching-21st-century-skills-to-21st-century-learners

Semilarski, H, Regina S, and Miia R. (2021). "Promoting Students' Perceived Self-Efficacy towards 21st Century Skills through Everyday Life-Related Scenarios" Education Sciences 11, no. 10: 570. https://doi.org/10.3390/educsci11100570

Setiadi, B. R., Subagyo, A. B. J., Nurtanto, M., & Sugiyono, H. N. (2019). Mobile pocketbook of the 4Cs skills-oriented inform of Quick Response Code.

Shalehah, T & Rohadi, T & Yavani, Z. (2020). A comparison of 4Cs' praxis in two recommended English textbooks for senior high school in Indonesia. ELT Echo, 5(1) 55-66.

Siru, M. Lahdenperä, J. Nikander, L. Postareff, L. (2022) Students' experiences of the development of generic competences in the Finnish higher education context – the role of the teaching-learning environment and approaches to learning. **European Journal of Higher Education,** Pp. (1-20).

Slamet Widodo, R. K. W. (2020). Mengajarkan Keterampilan Abad 21 4C (Communication, Collaboration, Critical Thinking and Problem Solving, Creativity and Innovation) Di Sekolah Dasar. MODELING: **Jurnal Program Studi PGMI,** Vol. (7) Iss. (2), pp (185–197)

Stauffer, Bri .(2022) Ultimate Guide to Teaching 21st Century Skills in Secondary Schools https://www.aeseducation.com/blog/what-are-21st-century-skills

Stehle, S.M., Peters-Burton, E.E(2019). Developing student 21st Century skills in selected exemplary inclusive STEM high schools. https://doi.org/10.1186/s40594-019-0192-1

UNICEF. (2017). Analytical Mapping of Life Skills and Citizenship Education in Middle East and North Africa. Amman: UNICEF MENA Regional Office.

Voogt, J., & Pareja Roblin, N. (2010). **21st century skills. Discussienota. Enschede: Universiteit Twente.** WRR (2007). Identificatie met Nederland. Den Haag: WRR.

Yousef , A . & Jourea , R. (2019) Integrate some of the 21st century skills into the curricula of the second category of basic education from the point of view of teachers and specialist directories .**Tishreen University Journal for Research and Scientific Studies Arts and Humanities Series** . Vol. (41) Iss . (5)

List of Appendices

Appendix 1

No.	Main axe	Item	Frequencies	Percentages
.١	Creativity	Content includes a wide range of ideas creation techniques (such as brainstorming)		
.٢		Content produces new and worthwhile ideas		
.٣		Content includes special ideas in order to improve and maximize creative efforts		
.٤		Content develops new ideas for others effectively		
.٥		Content delivers ideas to learners effectively		
.٦		The content should be responsive to new and diverse views.		
.٧		Content includes integrating group inputs and feedback into the work		
.٨		The content shows originality and innovation in working with others		
.٩		The content emphasizes that creativity . and innovation is a periodic long-term process of small successes and repeated mistakes		
.١٠		Content should adopt creative ideas to make a tangible and useful contribution to the area where innovation will occur		

.١١	Critical thinking	Encourages content to use different types of thinking (inductive, inductive, etc.) according to the requirements of the educational situation		
.١٢		The content analyzes the interaction of parts of each other to produce comprehensive results		
.١٣		To direct content towards meditation on the elements of ideas		
.١٤		Content effectively analyzes and evaluates evidence, arguments, allegations and beliefs		
.١٥		The content should analyze and evaluate alternative and key views		
.١٦		To roll up content and make connections between information and arguments		
.١٧		The content interprets the information and works to draw conclusions based on the best analysis		
.١٨		Teach content to think critically about learning experiences and processes		
.١٩		Content solves different types of unfamiliar problems in a variety of ways		
.٢٠		Identify content and ask important questions that illustrate different points of view and lead to better solutions		
.٢١	Communication	Content expresses ideas effectively using oral communication skills in a variety of formats and contexts		
.٢٢		Content expresses ideas effectively using written and non-verbal communication skills in a variety of formats and contexts		
.٢٣		Content enhances listening skills effectively to understand deep and superficial meanings.		

٢٤.		The content should employ communication skills for a range of purposes (e.g. for information, guidance, motivation and persuasion)		
٢٥.		Content should use multiple media and technologies		
٢٦.		Content develops opportunities to communicate effectively in a variety of environments.		
٢٧.	Collaboration	Content shows the ability to work effectively with diverse teams		
٢٨.		The content shows flexibility and willingness to help make the necessary compromises to achieve a common goal		
٢٩.		The content should show a trend towards taking shared responsibility for collaborative work.		
٣٠.		The content should appreciate the individual contributions made by each team member		

Appendix 2

List of Validation Committee

No.	Juror's name	Place of work
1.	Prof. Afif Zaidan	Al-Quds university
2.	Prof. Nabeel Al-Jundi	Hebron university
3.	Dr. Adel Rayan	Al-Quds open university
4.	Dr. Hakam Hiji	Directorate of Education/southern Hebron
5.	Dr. Inass Naser	Al-Quds university
6.	Dr. Mohammad Shaheen	Al-Quds open university
7.	Dr. Mohsen Ades	Al-Quds university
8.	Dr. Muyassar Ghlasi	Directorate of Education/southern Hebron
9.	Dr. Nabeel Mughrabi	Al-Quds open university
10.	Dr. Suad Abed	Al-Quds open university

Appendix 3

Frequencies and percentages for each indicter in the (5th, 7th and 9th) grades according to 4Cs'.

	9th						7th						5th					
	F1	P1	Total	F2	P2	Total	F1	P1	Total	F2	P2	Total	F1	P1	Total	F2	P2	Total
1	26	31.30%	15.80%	20	22.20%	16.27%	24	66.20%	12.76%	30	50%	13.15%	0		10.95%	1	3.30%	11.87%
2	0	12%		12	13.30%		3	8.30%		6	10%		8	34.81%		6	19.40%	
3	5	6.02%		4	4.40%		3	8.30%		4	6.60%		0			5	16.10%	
4	3	3.60%		8	8.80%		0			3	5%		0			5	16.10%	
5	1	1.20%		7	7.70%		0			2	3.30%		6	26%		1	3.30%	
6	5	6.02%		15	16.60%		0			2	3.30%		1			2	6.45%	
7	21	25.30%		13	14.40%		6	16.70%		10	16.60%		8	4.30%		10	32.20%	
8	4	4.80%		4	4.40%		0			0			0			0		
9	1	1.20%		0	0.00%		0			0			0			0		
10	2	2.40%		7	7.75%		0			3	5%		0			1	3.30%	
Total	150			161			38			106			39			80		
11	16	10.60%	28.60%	9	5.60%	29.10%	6	6.80%	31.20%	10	9.43%	23.20%	1	2.60%	18.57%	0		30.65%
12	24	16%		24	14.90%		11	12.50%		16	15.09%		7	17.90%		20	25%	
13	38	25.30%		40	24.80%		24	27.30%		26	24.50%		19	48.70%		13	16.25%	
14	23	15.30%		25	15.50%		10	11.40%		12	11.30%		10	25.60%		19	23.75	
15	0	0%		5	3.10%		0			0			0			0		
16	25	16.60%		29	18.00%		16	18.18%		22	20.70%		0			26	32.50%	
17	7	4.60%		3	1.86%		8	9.09%		6	5.66%		0			1	1.25%	
18	12	8%		18	11.18%		8	9.09%		11	10.37%		1	2.60%		0		
19	3	2%		0	0.00%		0			0			1	2.60%		0		
20	2	1.30%		8	4.96%		5	5.68%		3	2.80%		0			1	1.25%	
Total	180			192			90			198			119			120		
21	47	26.11%	34.28%	56	29.16%	34.70%	19	21.10%	31.90%	39	21.90%	39.03%	17	14.20%	56.70%	8	6.70%	45.97%
22	70	38.80%		62	38.50%		36	40%		66	37.10%		76	63.86%		61	50.80%	
23	34	18.80%		37	19.30%		18	20%		45	25.30%		25	21%		33	27.50%	

24	16	8.80%		13	6.80%		4	4.40%		7	3.90 %		1	0.64%		3	2.50%	
25	1	0.50%		7	3.60%		6	6.60%		6	3.40 %		0			7	5.80%	
26	12	6.60%		17	8.85%		7	7.70%		15	8.40 %		0			8	6.70%	
Tot al	112			110			68			112			29			30		
27	49	43.75 %		44	40.00 %		39	57.30 %		50	44.6 0%		18	62%		16	53.30 %	
28	1	0.90%	21.30%	10	9.09%	19.90%	0		24.10%	2	1.78 %	24.56%	0		13.80%	0		11.49%
29	60	53.60 %		53	48.20 %		29	42.64 %		51	45.5 0%		11	38%		14	46.70 %	
30	2	1.80%		3	2.70%		6	8.80%		9	8.03 %		0			0		

List of Tables

List of Figures:

Table of Contents