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**Implementing English for Libya 21st Century Skills in First-Year State
Secondary Schools**

**Thesis Submitted in Partial Fulfilment of The Requirements for The
Master's Degree in English Language**

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Declaration

I, Aya Edawi Wheida, the undersigned, hereby confirm that the work contained in this thesis, unless otherwise referenced, is the researcher's work and has not been previously submitted to meet the requirements of an award at this University or any other higher education research institution. I furthermore cede the copyright of this thesis in favor of the University of Tripoli.

Aya Edawi Wheida

01/02/2023

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Abstract

This thesis investigates Libyan first-year secondary school English language teachers' perception and implementation of 21st century skills and the challenges they face. Forty teachers from 20 different schools in Tripoli participated in the survey. The researcher adopted a mixed-method approach to data collection to achieve the research objectives. A closed-ended questionnaire along with semi-structured interviews were used as research tools. The study found that the most practiced 21st century skills are collaboration and communication, and the least practiced are global connections. Not all teachers have the competence to teach the new 21st century skills and are hesitant to admit they have limited knowledge of such skills or how to implement them in practical terms. The absence of teaching tools such as PowerPoint or interactive whiteboards impedes the development of information literacy, collaboration, and self-directed learning. The researcher recommends supporting teacher professional development through a performance-based incentives framework combined with bolstering educational programs through technology to address the sense of dissatisfaction and largely-unmet demand for extra classes. In addition, administering annual tests at the beginning of the school year adds value to students' learning and provides baseline data for teachers and schools. Teachers should also be supported with workshops on teaching the new 21st century skills integrated with a follow-up scheme to ensure effective implementation of these skills in classroom practice.

تطبيق كتاب "اللغة الانجليزية لليبييا" لمهارات القرن الحادي و العشرين في السنة الاولى الثانوية الحكومية

المخلص

تبحث هذه الأطروحة في تصور وتطبيق مهارات القرن الحادي والعشرين من قبل معلمي اللغة الإنجليزية الليبيين في الصف الأول الثانوي والتحديات التي يواجهونها. شارك في الاستطلاع أربعون معلماً من 20 مدرسة مختلفة في طرابلس. اعتمد الباحث المنهج المختلط في جمع البيانات لتحقيق أهداف البحث حيث استخدم استبياناً مكوناً من أسئلة مغلقة بالإضافة لمقابلات شبه منظمة كأدوات بحث. وجدت الدراسة أن مهارات القرن الحادي والعشرين الأكثر ممارسة هي التعاون والتواصل ، وأقلها ممارسة هي مهارات الاتصال العالمية وان ليس كل المعلمين لديهم الكفاءة لتدريس مهارات القرن الحادي والعشرين الجديدة ويترددون في الاعتراف بأنهم يفتقرون إلى المعرفة بهذه المهارات أو كيفية تطبيقها من الناحية العملية. يؤدي عدم وجود أدوات تدريس فعالة مثل باوربوينت التقديمية أو السبورة التفاعلية إلى إعاقة تطوير محو الأمية المعلوماتية والتعاون والتعلم الذاتي. يوصي الباحث بدعم التطوير المهني للمعلمين من خلال حوافز قائمة على معدل الأداء للمعلمين وتعزيز البرامج التعليمية من خلال التكنولوجيا لمعالجة شعور المعلمين بعدم الرضا وتلبية طلباتهم بمزيد من الحصص الدراسية. بالإضافة إلى ذلك ، فإن إجراء الاختبارات السنوية في بداية العام الدراسي يضيف قيمة إلى تعلم الطلاب ويوفر بيانات أساسية للمعلمين والمدارس. يجب أيضاً تنفيذ ورش العمل حول كيفية تدريس مهارات القرن الحادي والعشرين وأن تكون هناك متابعة للتأكد من تطبيق هذه المهارات الجديدة في الواقع العملي.

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Chapter I: Introduction

1.0 Introduction

Globalization and digitization transformed the communication scene and changed the terrain of language and literacy education (Lotherington & Jenson, 2011). Consequently, there is an increasing concern over the efficient implementation of educational approaches to understanding literacy in today's knowledge society. Shoffner, De Oliveira, and Angus (2010) argue that English classrooms require a distinctive enactment of literacy. In particular, English teachers ought to recognize the flexible nature of literacies that deal with resources such as technology, media, personal/ social relationships, and culture. Libyan English Foreign Language (EFL) teachers emphasize teaching the four language skills (reading, writing, listening, and speaking) in isolation from the 21st century skills that EFL students need to succeed in the increasingly challenging professional world. The 21st century skills encompass three principal domains: Learning and Innovation, Career and Life, and Digital Literacy Skills (Trilling & Fadel, 2009). This thesis investigates teachers' implementation and perception of these skills connected with English language learning and teaching at some first-year secondary schools in Tripoli.

1.1 Statement of the study:

As a language of globalization, teaching English has required transformations in language education approaches in various countries, making English a critical school subject. Libya has a long tradition of teaching English as a Foreign Language, and all schools in Libya, whether public or private, offer English courses. Nevertheless, primary state schools have only recently started teaching English in the first grade instead of the fifth and continuing to secondary education. Students begin to learn reading, writing, and basic grammatical rules during the primary stage; then, they learn more advanced English in the preparatory and secondary schools with more complicated grammar and longer, more difficult passages. Consequently, new generations of school leavers heading for higher education can keep up with global development, search for knowledge, and learn to value and understand others' cultures and principles.

Schools must focus on developing 21st century skills to help students compete in the global economy. In order to develop these skills, schools need to provide students with the opportunity to use their hands and minds in real-world situations.

Our current secondary educational system has a problem with implementing 21st century skills. The schools lack language labs and audiovisual aids that can be used for language instruction, which makes it difficult for teachers to teach these skills. These resources are necessary for students to fully develop their communication and critical thinking skills. In addition to time constraints and large classes, these shortcomings exacerbate the challenges, causing teachers to make conscious decisions to teach specific skills and leave others out. Moreover, English teachers have no experience teaching 21st century skills; they have not been appropriately trained for the job. They teach English for Libya's new curriculum without any prerequisites of teaching practice or special training in teaching 21st century skills.

The teacher is a vital transforming mediator and must be provided with the necessary means to fulfill their part. Therefore, teachers must master all the crucial requirements to face the challenges in teaching 21st century skills, especially utilizing technology in classrooms, developing critical thinking between students and collaborative groups to improve students' understanding, and fostering self-directed learning. (Partnership for 21st Century Skills, 2010).

1.2 Significance of the study:

This study is significant as it will not only help teachers understand the practical implementation of 21st century skills but will also assist them in overcoming the challenges they face when teaching these skills. Furthermore, the study provides the Ministry of Education with up-to-date information regarding the progress of implementing 21st century skills. The Ministry can then consequently support the Libyan teachers with appropriate training on techniques to help incorporate 21st century skills.

1.3 Purpose of the study:

This study aims to investigate Libyan 1st-year secondary school English teachers' perceptions and implementations of 21st century skills. The study explores how Libyan EFL teachers apply 21st century skills in their teaching and what challenges they face.

1.4 Scope of the Study:

This study focuses on the implementation of the 21st century skills at 1st-year secondary state schools and the teachers' challenges in doing so. It covers twenty schools in Tripoli that are considered typical or representative of Libyan secondary state schools.

1.5 Research questions:

This study is to provide answers to the following research questions:

1. How do Libyan first-year secondary school teachers perceive 21st century skills?
2. To what extent are the teachers implementing 21st century skills in their classrooms?
3. What challenges or obstacles confront teachers in implementing 21st century skills?

1.6 Research methods:

The researcher answers the first two research questions through a teachers' questionnaire. The first two parts of the questionnaire focus on how teachers perceive and practice 21st century skills. The last part of the questionnaire and semi-structured interviews are used to answer the third research question related to the challenges and obstacles they face in adopting 21st century teaching practices. Thematic analysis is carried out to analyze the teachers' interview responses.

1.7 Outline of the study:

This thesis is divided into six chapters. Chapter one presents the introduction, significance of the study, its purpose, and scope. Chapter two discusses the literature review in addition to previous studies related to this topic. Chapter three outlines the research design, participants, and methods used in data collection. Chapter four presents the results of the study. Chapter five provides a discussion of the results. Conclusions and further recommendations are addressed in the final chapter.

Chapter II: Literature Review

2.0 Introduction

The literature review is divided into three sections. The first section serves as an introduction and sets up the general context of the study. In contrast, the second and third sections include previous studies that pertain to 21st century skills and teaching them.

2.1 The 21st Century Skills

The Organization for Economic Co-operation and Development's (OECD) Learning Framework 2030 states that education plays an essential part in expanding the knowledge, skills, attitudes, and values that allow individuals to add to and benefit from an inclusive and sustainable future. Learning how to outline focused objectives, work with others with different perspectives, find opportunities, and identify multiple solutions to problems is vital. Therefore, the education system should prepare students with the skills to become active, responsible, and engaged citizens (OECD, 2018). English Language Teaching (ELT) aims are modified to include developing students' social dependability instead of concentrating only on improving language skills. According to Eaton (2010), today's EFL classes should not concentrate on memorization and grammar; EFL classes are a place to utilize language and learn cultural knowledge.

The 21st-century skills blend content knowledge, specific skills, expertise, and literacies essential to succeed in work and life. The three 21st century skill categories are:

- Learning skills (Critical thinking, Creativity, Collaboration, Communication).
- Literacy skills or Digital Literacy Skills (technology, information, and media literacy).
- Life skills (self-direction, global connections, local connections).

2.1.1 Learning Skills (4Cs)

a) Communication Skills

Communication skills are critical for working collaboratively and effectively in the 21st century and are keys to ongoing learning and self-development throughout the lifespan. Communication skills include knowledge of grammar and vocabulary and working efficiently and collaboratively. They enable students to express their thoughts and ideas in oral, written,

or nonverbal forms. In addition to listening effectively, derive meaning, knowledge, values, and attitudes from interactions, and use various media effectively and appropriately. (Wilcox, et al 2017). EFL classes are the ideal place to improve students' communication skills.

b) Collaboration Skill

Lai (2011) states that collaboration requires students to work together, set goals, solve problems, answer questions, and exchange feedback. Moreover, structuring collaborative work, such as training students to give explanations and ask directly and explicitly for help, improving coordination, communication, decision-making, and negotiation skills.

Collaborative activities develop students' listening, speaking, reading, and writing skills. However, effective collaboration requires the ability and readiness to listen to others' ideas, be flexible, value the contributions of individuals, and share responsibility for the work achieved by the team. Kramarski and Mevarech (2003) conclude that students participating in cooperative learning expressed their writing ideas more effortlessly than those who worked alone.

c) Creativity Skill

Creativity is a way of adaptation. Creativity skills allow students to perceive ideas differently and use generating techniques (like brainstorming) to develop original ideas and invent solutions to complex problems. Concerning EFL classes, Tin (2013) suggests that language creativity can be described as the playful use of language to create a new meaning. Furthermore, students build cognitive and metacognitive skills when adding creative thinking in English classes. It also increases students' motivation to learn a foreign language and promotes students' ability to think flexibly (Read, 2015).

d) Critical Thinking and Problem-Solving Skills

Critical thinking requires students to be open-minded, curious, and truth-seeking. Critical thinking enables students to analyze and evaluate complex issues that are unclear and have no clear-cut answers. Critical thinking urges students to apply reflective, reasonable, rational thinking to gather, interpret and evaluate information and draw conclusions. For instance, group projects and book criticism, and thinking about solutions for real problems in groups can promote critical thinking and problem-solving skills. Since students will study, listen with awareness, and defend their thoughts and ideas to persuade the listeners, the four language skills (listening, speaking, reading, and writing) will be expanded eventually (Abrami et al., 2015; Halpern, 1998).

2.1.2 Literacy Skills or Digital Literacy skills

Using technology as a tool to improve Learning Skills refers to the ability to use and select the right technology for learning, analyzing, and interacting with the right source of information.

Prensky (2001) states that today's students have spent all their lives accessing and using different technologies to live and learn. Similarly, students' future careers will focus less on manual tasks and more on accessing abstract information (Voogt et al., 2013). Students already have the basic skills to manage digital networking. However, proper use of technology in search of knowledge for learning involves a more sophisticated approach; for instance, the technology's purpose, nature, and specifications, the need for flexibility to persist through technical malfunction, and the ability to determine the pedigree of information found on digital platforms (Tyner, 1998).

2.1.3 Life Skills or Career skills

a) Self-direction Skills

Self-directed learning skills are the basis of lifelong learning. They involve managing learning tasks without having them directed by others. Students develop their roles in learning by continuously monitoring their learning progress, identifying areas of deficit, and making a conscious effort toward self-improvement (Williamson, S. N., 2007). In other words, students need to be able to initiate plans and actions to solve problems, observe progress, and use assessment criteria and peer feedback.

b) Global Connection Skills

Global connection skills are considered one of the most challenging skills students need to acquire. It entails comprehending issues and experiences from different cultures, geographical locations, and global domains and acting accordingly. These skills help students examine and analyze multiple forms of data embedded in culture, e.g., norms, values, beliefs, and ideologies (Savin-Baden, 2014).

c) Local Connection Skills

Local connection skill is connecting with the local community and applying knowledge to solve problems. Efficient local connection skills are vital for students' deep understanding of their society. It is pointed out that local community engagement is improved through dialogue and storytelling on online social platforms. (Chen, et al, 2012)

2.2 Teachers' skills

Researchers agree that establishing an education system that concentrates on 21st century skills demands a well-built human base. Fullan & Watson (2011) claim that teachers who have only mastered lower-order thinking skills and lack a solid disciplinary background cannot teach 21st century skills. Growth in the capacity of the teaching force will take time; it is not only the teachers starting to enter the teaching profession who should be taught 21st century skills, but also the current teachers.

21st century teachers ought to have specific abilities, such as mastering knowledge, understanding 21st century pedagogy, observing student development, offering support, and using information technology and media (Buletin, 2015, as cited in Rusdin, 2018). In the same vein, Langworthy (2013) and Amran & Rosli (2017) note that teachers play a significant part in incorporating technology in the classroom, given that the integration of technology presents opportunities for students to acquire 21st century skills such as information skills, collaboration and self-access learning (Walser, 2008), as Barrows (1996) asserts that students should rely on their self-direction to choose various options based on their assessment of the available information.

Teachers' perceptions of 21st century pedagogy practice should be nourished with creative thinking, innovative thinking, critical thinking, and problem-solving and decision-making ability (Osman & Basar, 2016, as cited in Rusdin, 2018). Teachers ought to have the ability to plan and implement teaching and learning that fulfills the need to implement 21st century learning skills through efficient, exciting, and interactive pedagogy; since pedagogy is fundamental to quality teaching and learning achieved by the teacher and includes principles, techniques, and teaching processes (Ariffin & Yunus, 2017, as cited in Rusdin, 2018).

Saleh (2019) suggests the need to take some necessary steps to ensure the effective integration of these skills, such as training EFL teachers for this process. Libyan secondary schools' new English language curriculum aims to promote these skills. However, the integration of these skills necessitates a change in the methods of teaching and the assessment strategies being employed. This issue has been emphasized in the framework for 21st century learning: "21st century standards, assessments, curriculum, instruction, professional development, and learning environments must be aligned to produce 21st century outcomes for today's students" (P21, 2007: 1, as cited in Saleh, 2019).

Singapore confronted the challenge of developing 21st century teachers by establishing the Teacher Education Model for the 21st century (TE21). Based on the TE21, Singapore is implementing critical changes to the curriculum, pedagogy, assessment, theory-practice linkages, and physical infrastructure and addressing the concern that teachers need 21st century skills to teach them (Lee, 2012). Puteh et al. (2012) add that teaching weaknesses are caused by teachers' low expertise in teaching and understanding the ideas of new curriculum renovation.

Frequent Teacher Parent Communication promotes students' school dedication, responsibility, classroom activities, and homework completion (Kraft & Dougherty, 2013). Teachers are lasting learners and can influence students' thoughts, lifestyles, and behaviors (Kolo, 2009).

2.3 Teaching 21st century skills

This section highlights the approaches commonly followed when teaching 21st century skills in the EFL classroom.

Recently, researchers have examined the effects of applying the 4Cs in EFL classes, e.g., Fandiño (2013), Davila (2016), and Halvorsen (2018). They say grammar lessons are exciting, and the teachers are much more energetic. Even students with low-intermediate levels of English can express their thoughts and ideas successfully via oral, written, and nonverbal communication, recognizing challenging viewpoints, making decisions, and working productively with others. Additionally, students improve their 4Cs skills when discussing major topics in groups, writing down their conclusion, making presentations and comparisons, and solving problems.

The teacher's narrow strategy, technique, method, and approach lead to a lack of students' interest in the learning process. Consequently, applying different strategies and approaches in foreign language teaching draws students' attention to a subject and changes their perception. (Yunos, 2015; Salehudin, Hassan, and Hamid, 2015, as cited in Rusdin, 2018)

The English language syllabus has been changed to contain the elements of 21st century skills. Equally, teaching and learning methods have also been improved to consider these skills to prepare students for the 21st century (Nurazidawati et al., 2011). Yunos (2015) confirms that the best teaching and pedagogy practice is supposed to apply various methods,

strategies, techniques, approaches, and resources to help students stay focused during the teaching and learning process. In other words, teachers should enhance their pedagogical procedures and find innovative ways that allow students to foster these skills and make the right decisions for their future life and career in the 21st century (as cited in Rusdin, 2018). Muchlis (2015) and Küçükler & Kodal (2019) state that teachers might apply strategies to support learning in big groups, such as using technology in classrooms which will help students learn more effectively.

In another study, Saleh (2019) concludes that providing an appropriate atmosphere for developing critical thinking skills is a multidisciplinary process and requires cooperation and mutual understanding among all involved in the teaching/learning process. Therefore, the EFL class is the ideal place to develop the 21st century skills merged with the four language skills to build up students' life skills.

Chapter III: Methodology

3.0 Introduction

This chapter explains the methods and techniques used to measure the core practices, the perception, and the challenges of 21st century skills at state secondary schools in Tripoli. The previous chapter reviewed the main concepts, teachers' skills, and a review of the literature on teaching 21st century skills. This chapter includes the research philosophy, a discussion of the research design, participants, sampling, instruments used for the data collection, the data collection and analysis procedure, and the methodological ethics and limitations.

3.1 Research philosophy

Research philosophy refers to how data about a topic should be gathered, analyzed, and used. The research philosophy is the study's base and shapes all other research design choices.

Positivism and interpretivism are two of the most popular research philosophies. In quantitative studies, positivism is the fundamental research philosophy. It claims that the researcher can objectively perceive reality. On the other hand, interpretivism assumes that the researcher has a part in observing things. That experience is original to each observer, the fundamental research philosophy in qualitative analyses, i.e., the truth is subjectively perceived (Alharahsheh, H. H., & Pius, A., 2020).

In this study, the researcher used both; qualitative and quantitative approaches. The use of mixed methods was essential to this research project because implementing 21st century learning skills in teacher education programs is a multifaceted, complex issue. Data sources included the perceptions of the teachers, implementation of the 21st century skills, and the challenges they face.

3.2 Research design

The study aimed to investigate Libyan 1st-year secondary school English teachers' perceptions and implementations of 21st century skills. To explore what challenges the Libyan EFL teachers face when applying 21st century skills in their teaching.

As described in the literature review section, there is a lack of information on how Libyan secondary school teachers perceive these skills and implement them into their teaching. Filling that gap was one of the purposes of the current research.

The researcher adopted a mixed-method approach to data collection to achieve the research objectives, commonly used in social science research. The researcher gathered quantitative and qualitative data, analyzed them separately, and then compared the findings to see if they supported or opposed each other.

The researcher used a questionnaire of closed-ended questions (three parts of the questionnaire were researcher-developed questions, and one part was adopted from Hixson, N. K., Ravitz, J., & Whisman, A. (2012) which has been thoroughly reviewed, prepared for re-use, and reported to receive high reliability and content validity to measure 21st-century skills' implementation) and a semi-structured interview, as research tools. Closed-ended questions support drawing general conclusions since the researcher determines the range of possible answers. At the same time, interview questions collect information that seeks to dig deep into the topic to gain information about participants' thoughts, opinions, and attitudes, give flexibility to unidentified trail ideas during the research, and investigate the processes successfully.

3.3 Participants

Teaching English has become an essential part of the education curriculum in Libya. To cope with the changing world, the Ministry of Education has started to modernize school curricula, and this change employs more challenging teaching methodologies. For conducting this study on the state teachers who teach 21st century English for Libya, 1st year secondary, forty Libyan teachers (five males and thirty-five females) were selected randomly from twenty different schools in Tripoli. The teachers aged from the early twenties to late fifties with different teaching experiences. In the beginning, the teachers were briefed on the study's objective and formally requested to participate, and they were informed that their privacy would be preserved with utmost care.

3.4 Sampling

The participants' base included teachers with bachelor's degrees in the English Language, teaching 21st century English for Libya, 1st-year secondary. The researcher applied simple random sampling (SRS) as the basis for choosing the teacher sampling; to

ensure that the study results will be generalizable to the entire 1st-year secondary state English teachers in Tripoli.

3.5 Data collection instruments

The present study used a teacher's questionnaire and interviews in gathering data. The base of data collection was mixed methodology, defined as mixing data or methods so that various perspectives shed light on the issue and increase the validity and reliability of the research (Strauss and Corbin, 1998). A more evolved triangulation requires integration methodologies, such as questionnaires with interviews (Olsen et al., 2004). Mainly, the literature review was the primary tool for gathering a collection of constructs that indicated theoretical concepts for this study.

This study applied a mixed-method approach to strengthening the data's quality and credibility to understand better how teachers in Tripoli, Libya, are implementing 21st century skills. As a result, it assisted in removing bias from research findings and assuring the research's validity and reliability.

Each approach has flaws. According to Cohen et al. (2005), a researcher's reliance on one approach may skew or distort his understanding of the particular area of reality they are researching. Adding, the drawbacks of each of these methods could be eliminated by applying a mixed methodology approach to a given issue to overcome their flaws.

3.5.1 Teachers' questionnaire

Closed questions collect quantitative data. They are easier to understand and interpret as participants can answer quickly. They give the respondent a limited amount of options from which to choose. Moreover, the questionnaire is an efficient and inexpensive method to gather information from study subjects.

The questionnaire had four parts, i.e., Part A, Part B, Part C, and Part D (see Appendix A). Each of the parts addressed one research question. Part A was about the respondents' age, teaching experience, and gender. Part B looked at how Libyan secondary school teachers perceive 21st century skills. At the same time, part C addresses how teachers implement 21st century skills into their teaching, and part D the challenges or obstacles that confront teachers in implementing 21st century skills.

The questionnaire included two parts with a Likert scale. With a five-point system, a Likert scale to measure teachers' perceptions and challenges, the responses ranged from '1' (strongly disagree) to '5' (strongly agree). In addition to a Frequency scale, different practices on 21st century skills were measured with a 5-point frequency scale, with 1 'Almost never'; 2 'A few times a semester'; 3 '1-3 times per month'; 4 '1-3 times per week'; 5 'Almost daily.'

3.5.2 Teachers' interviews

To determine the difficulties or obstacles teachers face when incorporating 21st century skills. After completing the questionnaire, teachers were asked to participate in an interview. The interview was chosen because it allows researchers to investigate not immediately obvious issues (Mackey & Gass, 2005).

In the interview, the teachers were asked two questions to elicit additional information about the obstacles and challenges they are confronting, as well as to express their perspectives in-depth and speak freely and honestly. With these questions, participants responded in their own words and clarified their answers. Gass & Mackey (2005) stated that a semi-structured interview is an interview in which researchers choose several questions as a reference to digging for extra information. All of the teachers who responded to the survey were interviewed. The interview questions were left open-ended to gather more information and encourage participants to elaborate on their points of view (see Appendix B).

The first methodological advantage of semi-structured interviews is that they allow for a detailed expression of the participants' experience. It is a critical point for exploring participants' challenges with different aspects of their schools' language learning environment. The second methodological advantage relates to interviewees' time: semi-structured interviews take little time to complete. Finally, the third positive aspect has to do with reflexivity. In contrast to other qualitative methodologies, such as focus group talks or observations, semi-structured interviews provide explanations and reasoning. Nevertheless, the main drawback of an interview is that it takes up much more of the researcher's time, mainly when the sample size is large (Kothari, 2004).

3.6 Data collection procedure

The data collection was carried out in three phases: (1) self-administered. (2) interviewer-administered questionnaires; to ensure participants would not leave a blank answer and allow flexibility. (3) semi-structured interviews so that the researcher could ask

the participants to clarify or elaborate when required and have flexibility in their responses. At the same time, the researcher confirmed that there were no right or wrong answers.

Presenting the questionnaire in Arabic and English relieved the participants and increased the reliability of their answers. Moreover, during this process, the researcher clarified to the participants any parts of their questionnaire if something needed to be explained.

Once the teachers answered the questionnaires, the researcher started face-to-face or phone interviews. Since most teachers did not agree to record their voices, the researcher took notes.

3.7 Data analysis procedure

Both qualitative and quantitative approaches were conducted and used in the analysis. Combining both approaches can achieve complete and accurate results. This approach ensures that all aspects of 21st century skills are discussed in the analysis.

The researcher considered quantitative methods in analyzing the answers to the close-ended questions through descriptive statistical analyses. After descriptive statistical analyses, the mean scores and frequency received from each item were reported. Excel calculated the data (using Data Analysis Tool) to save time and effort.

A theme is a recurring trend in the data that refers to a specific subject or issue (Lincoln & Guba, 1985). The actual state of this occurrence may be found by examining and then interpreting the data from the interviews. The answers to the interview questions were analyzed using thematic analysis. It emphasizes, detects, analyses, and interprets recurring themes within qualitative data, making it one of the most commonly used types of analysis in qualitative research. The researcher formed themes to understand the participants' responses better and then coded the qualitative data. The Arabic responses had to be translated into English first, and then themes were developed and coded.

3.8 Methodological limitations and ethics

The methodological limitations of each research are different. The researcher contacted around sixty teachers from various schools in Tripoli for this study, but only forty agreed to participate.

Before they consented or denied participating, the researcher described the study's goal and informed them that they could withdraw at any time and that their personal information and the school's name would be anonymous. As a result, participant rights are respected, study validity is improved, and scientific integrity is preserved.

Chapter IV: Results

4.0 Introduction

This chapter includes analyzing and interpreting data gathered from interviews and questionnaires distributed to the English language teachers teaching the first year of secondary. This chapter also presents data in various forms and their corresponding interpretation.

4.1 Demographic data of the participant teachers

As mentioned in the previous chapter, there were 40 participants in this study. Most participants were females (88%), and the majority had more than five years of experience (93%). The dominant age group aged between 35-44 (45%).

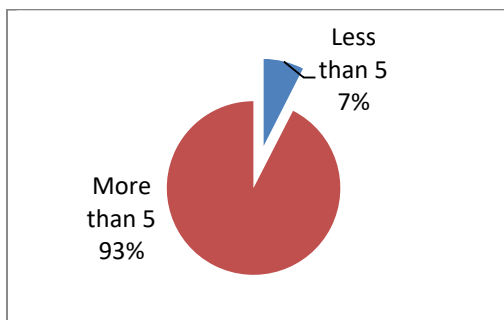


Figure (1) Participants' years of experience

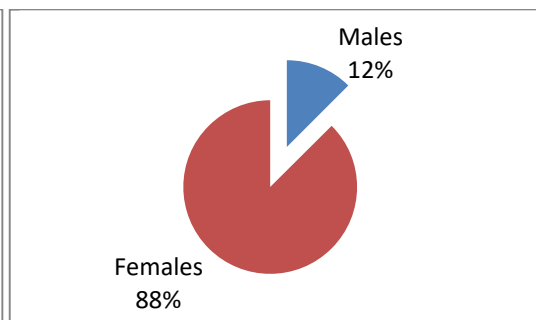


Figure (2) Participants' gender

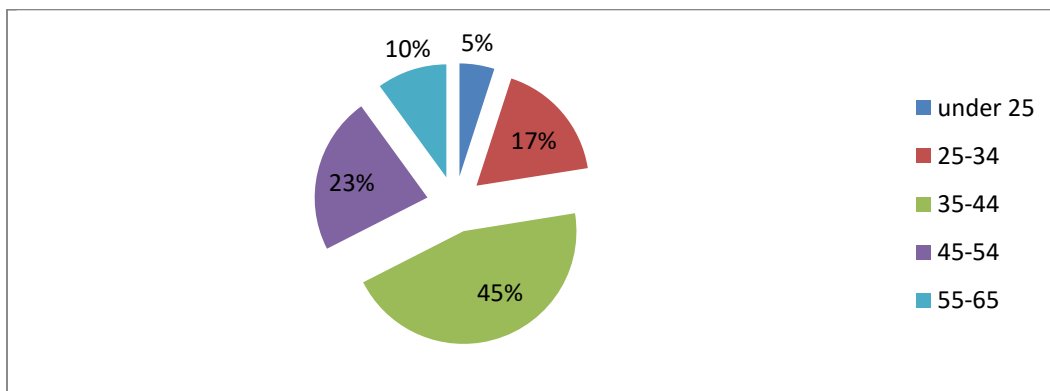


Figure (3) Participants' age group

4.2 Teachers' perception of the 21st century skills

This part of the thesis concerns the results of the first research question: RQ1: **How do Libyan secondary school teachers perceive 21st century skills?** Quantitative data were analyzed using descriptive analysis; this section reveals teachers' opinions and views about teaching 21st century skills.

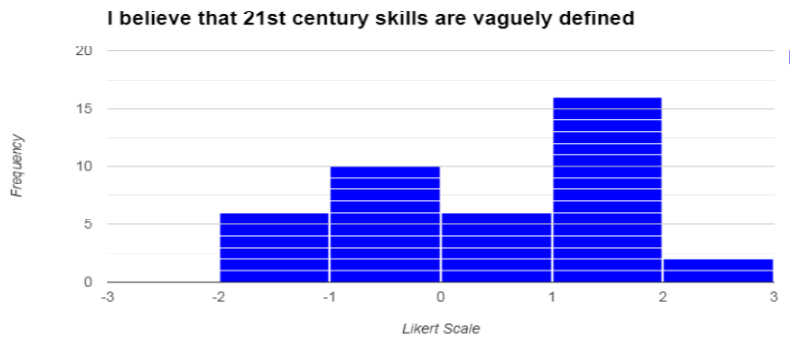


Figure (4)

According to figure (4), the teachers are neutral with the first question with a (-0.05) mean. Though, 45% of the teachers (strongly) agree that 21st century skills are unclear or indefinite.

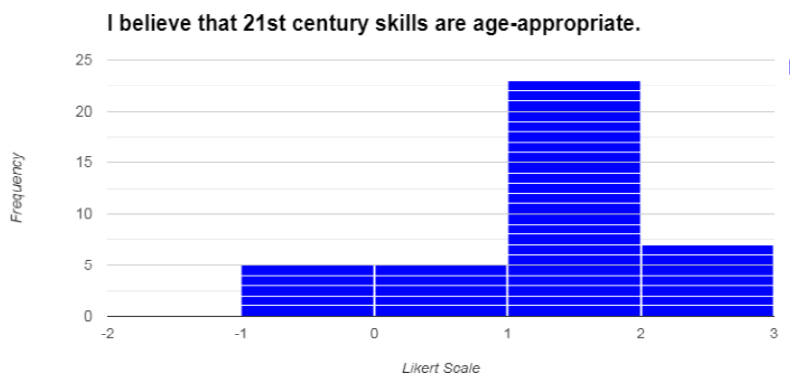


Figure (5)

Twenty-three or (57.5%) of the teachers agreed, and seven (17.5%) strongly agreed with the second question. Skewed to the left as the concentration is to the right of the mean (0.8), As shown in figure (5).



Figure (6)

In figure (6), a left-skewed histogram details the participants' agreement on the third question. This question received the highest mean (1.125); 82.5% of the teachers (strongly) agreed.

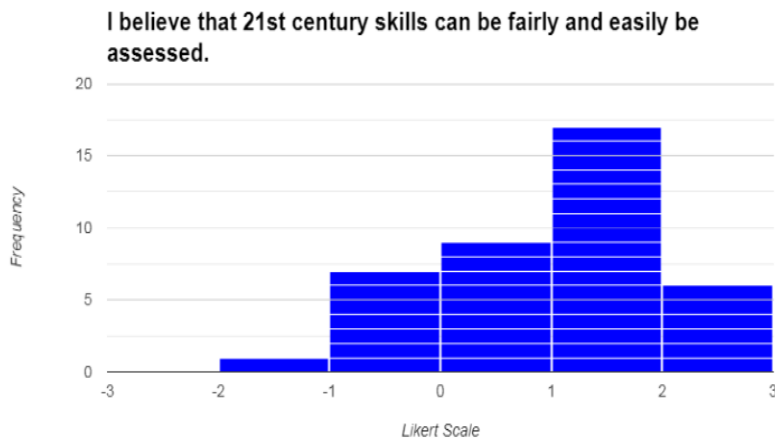
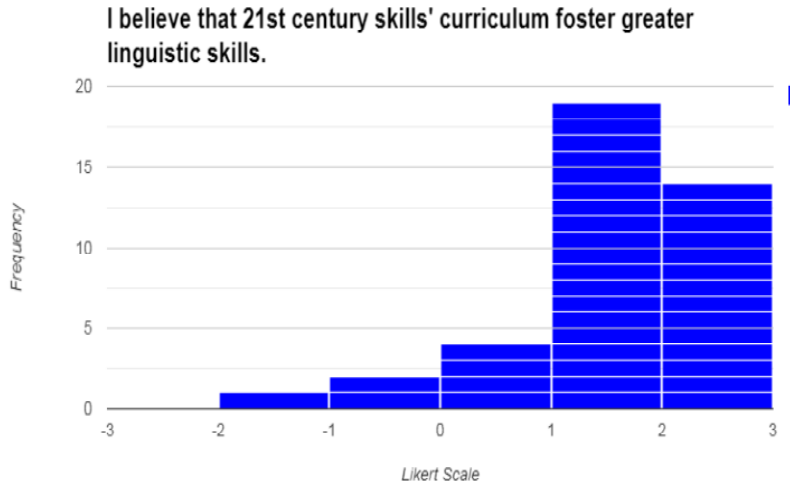


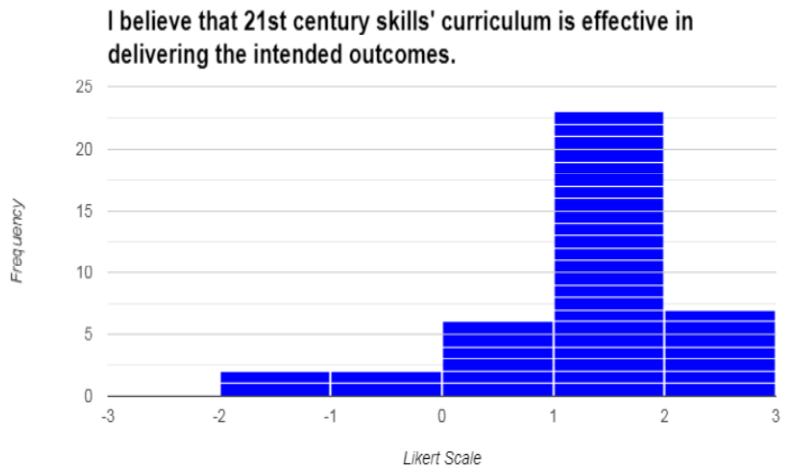
Figure (7)

Figure (7) describes the positive agreement of 57% of the teachers on the fourth question with a mean of (0.5).



Observably, in figure (8). A total of (82.5%) thirty-three teachers (strongly) agreed on the fifth question with a mean of (1.075).

Figure (8)



With a mean of (0.775), 57.5% of the teachers agreed on the sixth question. As clearly shown in figure (9).

Figure (9)

4.3 Teachers' implementation of the 21st century skills

This part is devoted to answering the following research question: **RQ2: To what extent the teachers are implementing 21st century skills into their teaching?** Quantitative data were analyzed and compared.

In this part of the questionnaire, a pair of practices that substantiate one skill has been placed together along with the frequency scale (0: almost never) to (4: almost daily).

Table (1) confirms the eight components of 21st century learning skills that teachers practice in class. This part of the questionnaire asked about the teaching practices that

maintain students' learning of 21st century skills, "In your teaching, how often have you asked students to do the following?".

The 21st century skills considered to get the most amount of practice were collaboration (mean=2.26), critical thinking (mean=2.225), communication (mean=2.125), self-direction (mean=1.9) and creativity (mean=1.787), while using technology as a tool for learning (mean=1.437), local connection (mean=1.275), and global connection (mean=1.125) received less practice.

The average implementation of the eight skills was (1.76); which means that the skills are only 1-3 times per month practiced.

Table (1): The average implementation of the eight skills.

Frequency of classroom teaching practices that developed 21st-century skills	Total Mean	Response interpretation
Collaboration skills	2.26	1-3 times per month
Critical thinking Skills	2.225	1-3 times per month
Communication skills	2.125	1-3 times per month
Self-direction skills	1.9	1-3 times per month
Creativity skill	1.787	1-3 times per month
Using technology as a tool for learning	1.437	A few times a semester
Local connection skills	1.275	A few times a semester
Global connection skills	1.125	A few times a semester

Table (2) illustrates the two statements of the 21st century skills, which received the highest mean, "Answer questions in front of an audience." and "Summarize or create their interpretation of what they have read or been taught." as class activities which the teachers use to develop students' 21st century skills.

Table (2): The two highest implemented practices.

The two most frequent class activities rated by participants	Mean	Response interpretation
Answer questions in front of an audience. (communication skill)	3.05	1-3 times per week
Summarize or create their interpretation of what they have read or been taught. (Critical thinking skill)	2.825	1-3 times per week

4.3.1 Communication skill

Figure (10) confirms the mean (2.125) of the implementation of the communication skill.

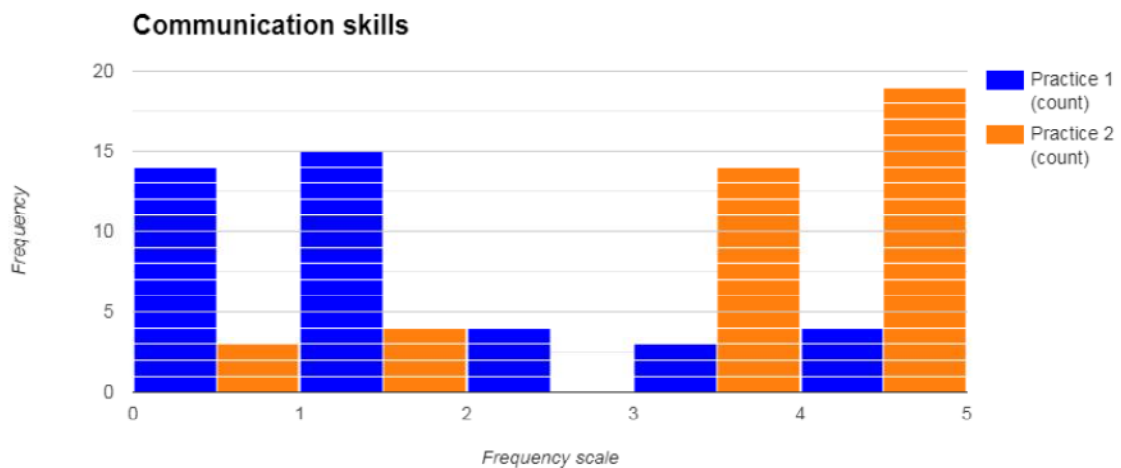


Figure (10): - Practice 1: "Prepare and deliver an oral presentation to the teacher."
 - Practice 2: "Answer questions in front of an audience."

Within one skill, the distribution on the lower extreme of one practice and the upper extreme of the other indicates that teachers prefer to use practice (2) over practice (1). To detail, practice (2) had the higher mean of (3.05), though only 47.5% said they use it almost daily.

In practice1, 35% of the teachers answered (0: almost never), and 10% responded (4: almost daily). However, practice 2 had the highest mean, although only 7.5% replied (0: almost never), (47.5%) of the participants voted (4: almost daily).

4.3.2 Global connection skills

As shown in figure (11), the mean is (1.125).

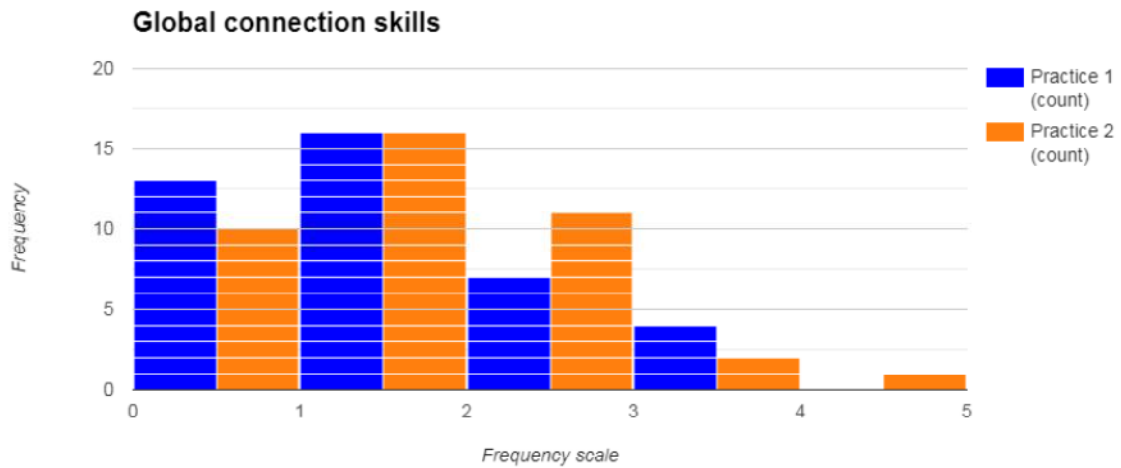


Figure (11): -Practice 1: "Study information about other countries or cultures."
-Practice 2: "Use information or ideas that come from people in other countries or cultures."

The teachers prefer not to use both practices, shown by the distribution in the lower extreme of the frequency. To detail, practice 1 with the lowest mean of (1.05); 32.5% of the teachers answered (0: almost never), and 0% responded (4: almost daily). Likewise, practice 2 had a mean of (1.2), 25% answered (0: almost never), and 2.5% (4: almost daily).

4.3.3 Self-direction skills

Figure (12) verifies the mean of the skill practices with (1.9).

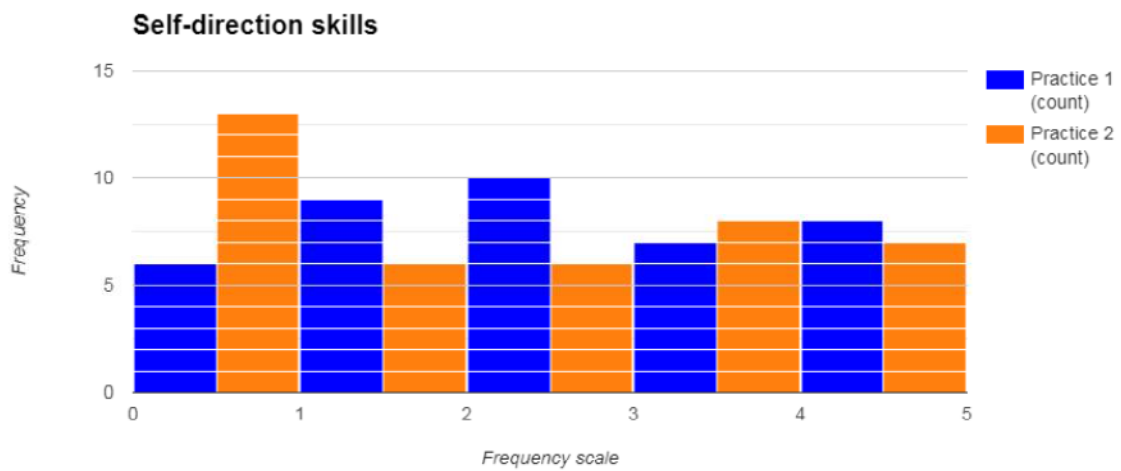


Figure (12): - Practice 1: "Choose their topics of learning or questions to pursue."
- Practice 2: "Plan the steps they will take to accomplish a complex task."

The frequency spreads over a wide range (almost never to almost daily), which shows diversity in teaching or delivering this skill. There is practically no preference for one practice over the other. It is almost a uniform distribution.

Practice 1 with a mean of (2.05); 15% of the answers were (0: almost never), and 20% were (4: almost daily). While practice 2 had a mean of (1.75); 32% of the total responses were (0: almost never), and 17.5% were (4: almost daily).

4.3.4 Collaboration skills

These skills received the highest mean of (2.26), as shown in figure (13).

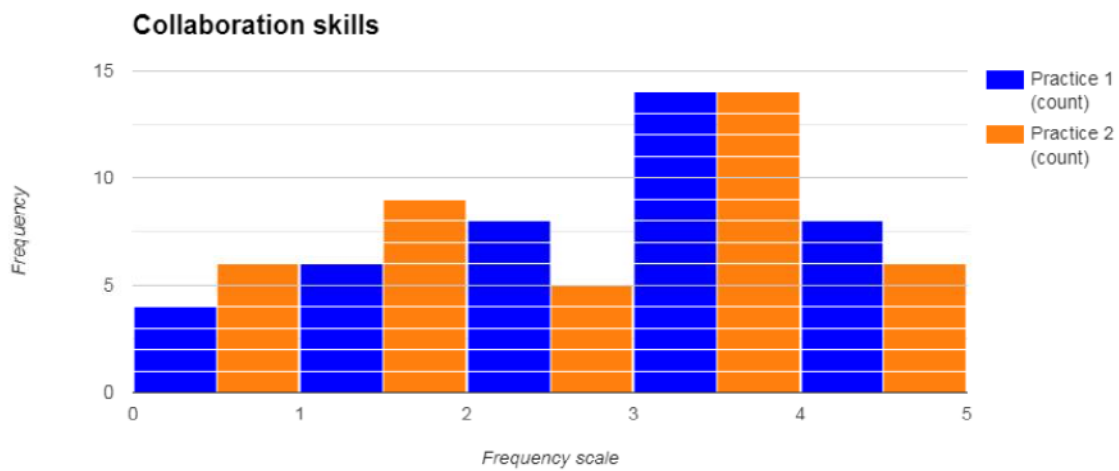


Figure (13): -Practice 1: "Work in pairs or small groups to complete a task together."
 -Practice 2: "Work as a team to incorporate feedback on group tasks or products."

Both practices display the same kind of pattern and behaviour. The distribution is almost identical; they even peak at the same place (1-3 times a week).

To detail, the mean of practice 1 was (2.4). 10% of the responses were (0: almost never), and 20% were (4: almost daily). Whereas practice 2 had a mean of (2.125). (0: almost never) and (4: almost daily) both had an equal of respondents; 15% each.

4.3.5 Critical thinking

Figure (14) describes how the mean (2.225) was determined.

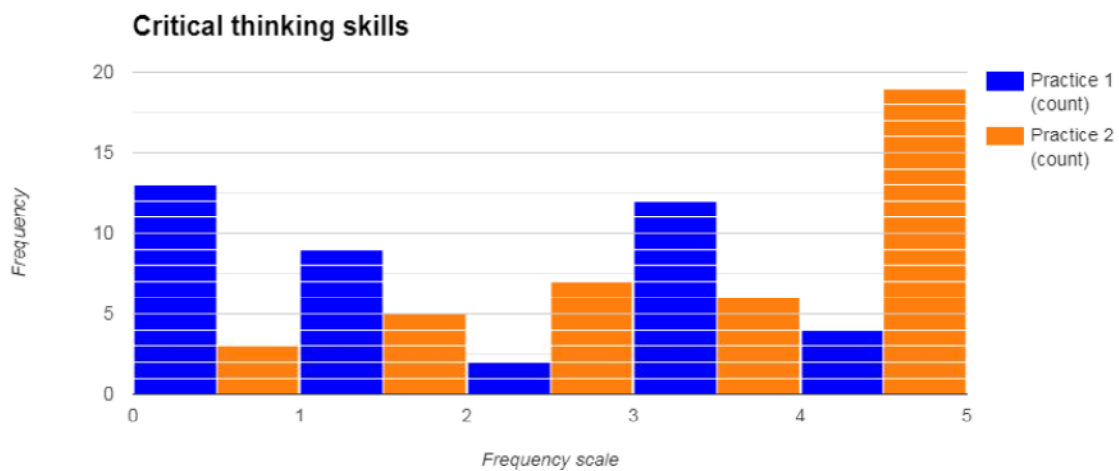


Figure (14): - Practice 1: "Compare information from different sources before completing a task or assignment."
 - Practice 2: "Summarize or create their interpretation of what they have read or been taught."

Teachers use practice two almost daily; the distribution was towards the upper extremes. Whereas practice 1 fluctuates around 0 (Almost never) and 3 (1-3 times a week), teachers disagree within that practice; some use it rarely to others who use it almost daily.

Practice 2 skewed the mean of the skill to the upper end, and as a result, critical thinking has a mean of 2.225.

In detail, practice 1 with a mean of (1.625). About one-third of the participants (32.5%) said they seldom practiced it (0). As 10% practice it almost daily (4). Although, practice 2 had a mean of (2.825). 7.5% of the teachers answered (0: almost never), and 47.5% answered (4: almost daily).

4.3.6 Using technology as a tool for learning

Figure (15) explains the teachers' answers on the frequency of practicing this skill. Using technology received a mean of (1.437).

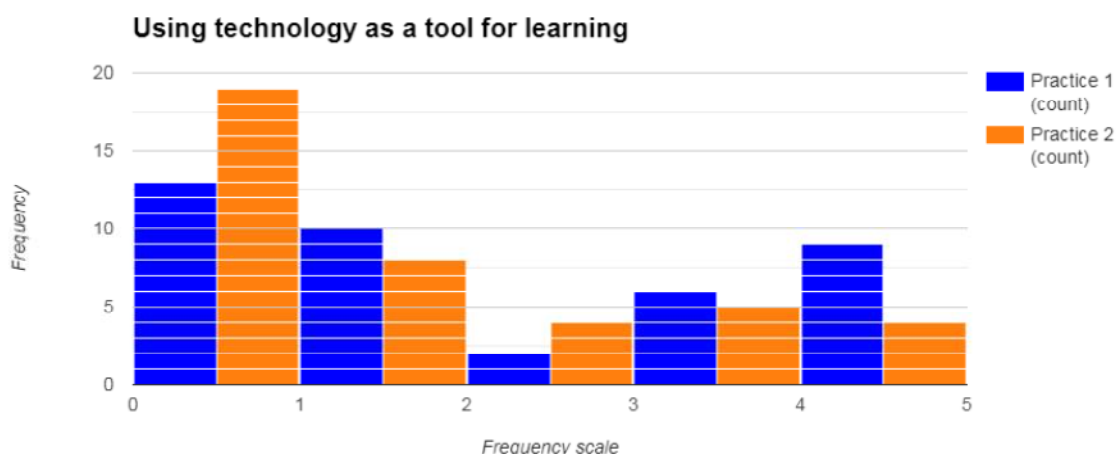


Figure (15): - Practice 1: Use technology or the Internet for self-instruction(e.g., Khan Academy or tutorials videos, etc.)
 - Practice 2: Use technology to help them share information (e.g., presentations using sound or video, etc.).

Both practices peak at the lower end. Within the skill as a whole, the two practices are coherent. Within each practice, a group never does and does more frequently.

The mean of practice 1 was (1.7). 32.5% of the respondents replied (0: almost never), and 22.5% answered (4: almost daily). Furthermore, practice 2 had a mean of (1.175). (0: almost never) was the answer of 47.5% of the teachers, while 10% answered (4: almost daily).

4.3.7 Creativity and innovation skills

Figure (16) describes the computation of the mean (1.787).

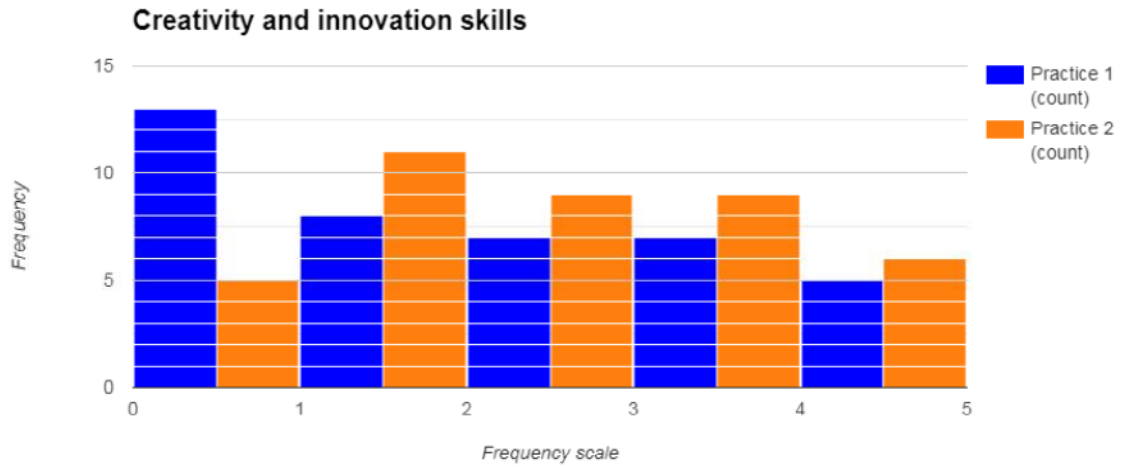


Figure (16): - Practice 1: "Use idea creation techniques such as brainstorming or concept mapping."
- Practice 2: "Generate their ideas about how to confront a problem or question."

There is an incoherence in behavior between both practices; teachers prefer one practice over the other. It is observable by comparing the means of the two practices.

Practice 1 has a mean of (1.575). (0: almost never) was the response of 32.5% of the teachers, along with 12.5% who had the answer of (4: almost daily). As practice 2's mean was (2). 12.5% replied (0: almost never) and 15% with (4: almost daily) as their answer.

4.3.8 Local connection skills

Figure (17) determines the mean of this skill by (1.275).

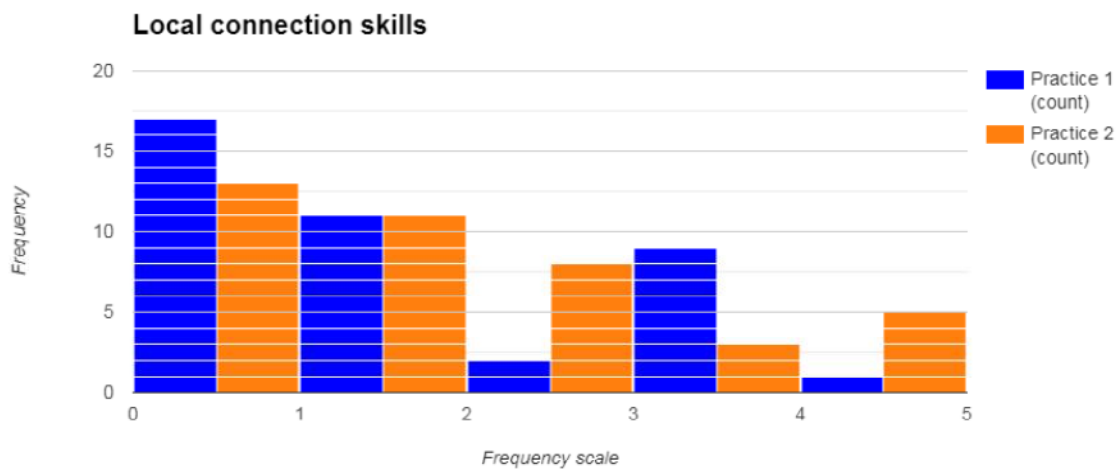


Figure (17):- Practice 1: "Investigate topics or issues that are relevant to their family or community."

- Practice 2: "Apply what they are learning to local situations, issues, or problems."

There is consistent behavior. Both practices are coherent and peak at the lower end, i.e., they are right-skewed, concentrated at the lower extreme. As a result, the mean of this skill is at the lower end.

Practice 1 with a mean of (1.15). (0: almost never) was the answer of 42.5% of the participants, while only 2.5% replied with (4: almost daily). Similarly, practice 2 had a mean of (1.4). 30% had the answer of (0: almost never), and 12.5%'s response was (4: almost daily).

4.4 Challenges that confront teachers

This section of chapter four discusses the results of the third research question: **RQ3: What challenges or obstacles confront teachers in implementing 21st century skills?** Seven closed-ended questions and two interview questions were analyzed quantitatively and qualitatively accordingly.

4.4.1 Obstacles in adopting 21st-century skills

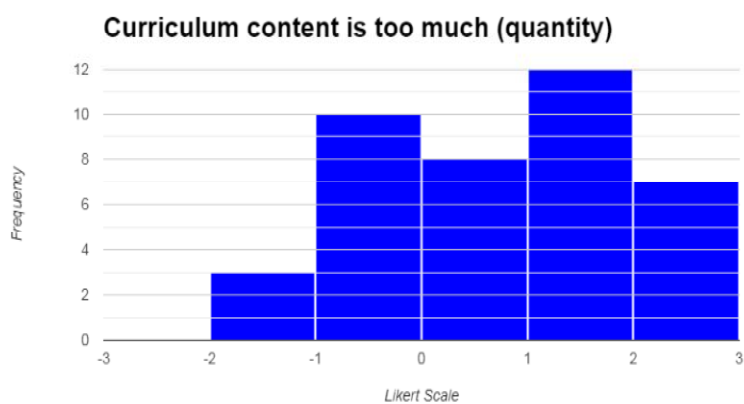


Figure (18)

(0.25) was the mean of the first question; approximately neutral. Though 30% of the teachers agreed, and (17.5%) strongly agreed.

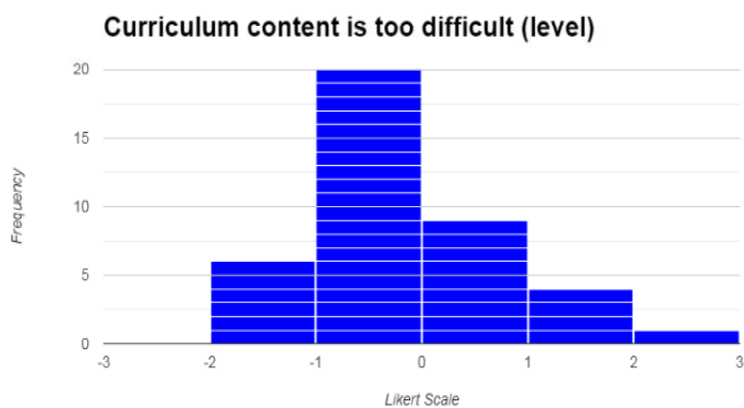
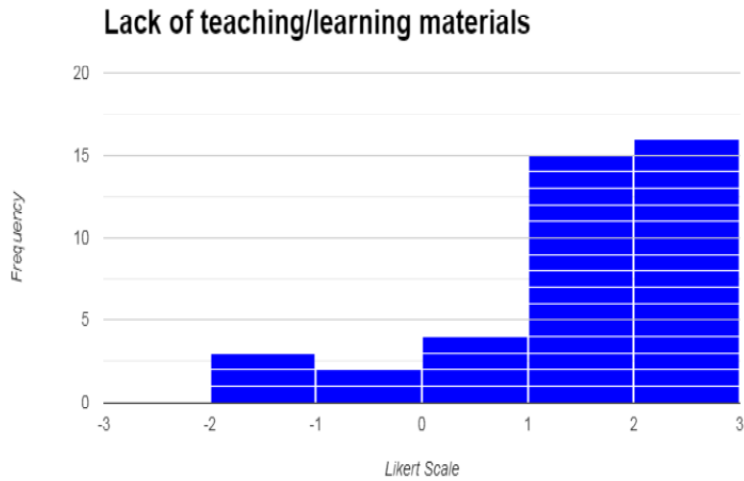


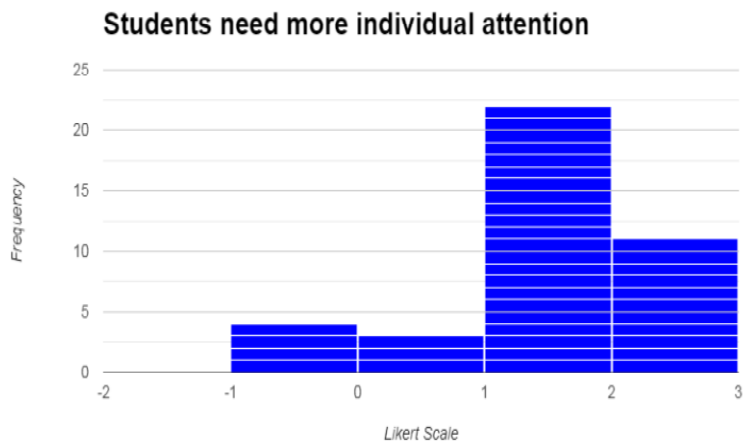
Figure (19)

The results of the second question show that 50% of the teachers agree with the suitability of the curriculum level. Figure (19) proves this with (-0.65).



As shown in figure (20), the histogram is left-skewed with a mean of (0.975). 77.5% or Thirty-one teachers (strongly) agreed.

Figure (20)



In figure (21), the fourth question received a considerable agreement of (1) as a mean; thirty-three or 82.5% of the teachers think students need more individual attention.

Figure (21)

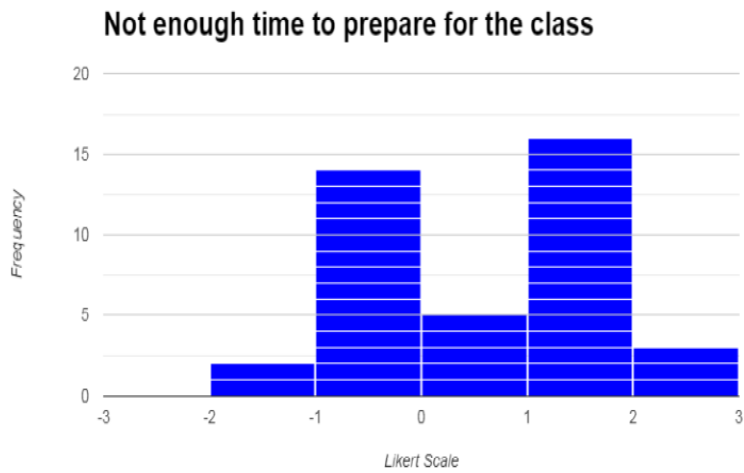


Figure (22)

Figure (22) details the answers to the fifth question with a mean of (0.1) which is "Neutral.". Only nineteen teachers said they have the time to prepare, whereas sixteen said they do not.

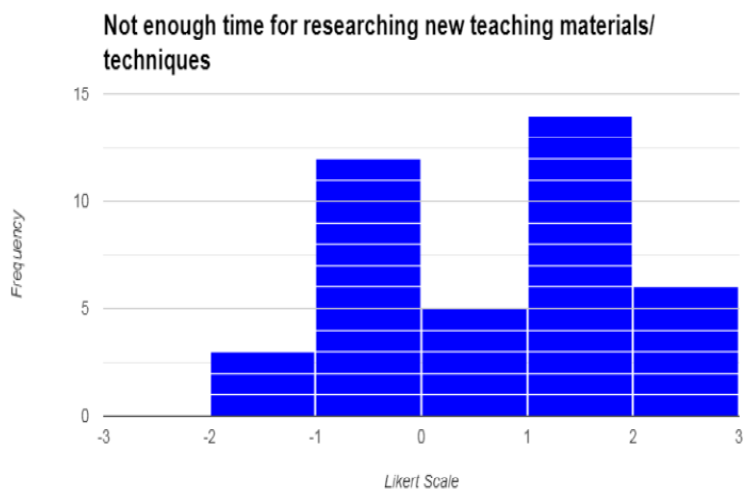
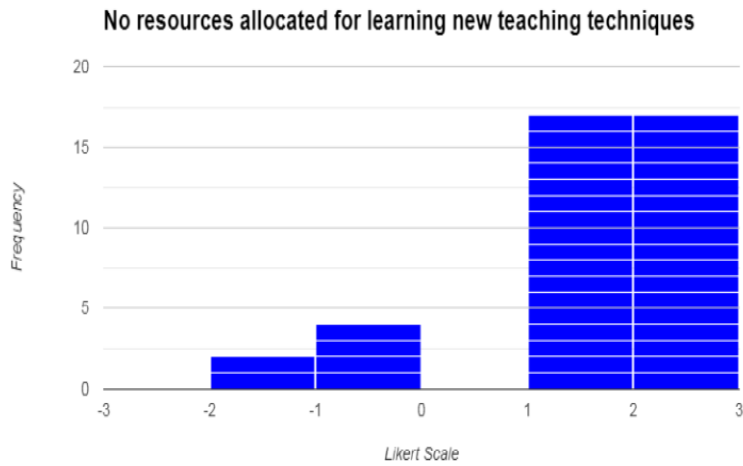


Figure (23)

The mean of the sixth question was (0.2), which is "Neutral," even though twenty or 50% of the teachers (strongly) agreed with it.



With a mean of (1.075), teachers agreed with the seventh question. It is left-skewed; the distribution of 85% of the answers was between "agree" and "strongly disagree."

Figure (24)

4.4.2 Difficulties and suggestions in developing 21st century skills in students

The teachers' responses to the interview questions were thematically analyzed. The two questions were: "What difficulties do you face in developing this set of skills in students?"; and "What needs to be done to effectively develop 21st century skills in students?".

First, the obstacles or challenges, as shown in figure (25), the teachers confront in developing 21st century skills in students. Namely, issues include students' ability or level, teaching methods and material, time, curriculum, and environment. In other words, how the teaching and the learning process can hold back the development of this set of skills in students.

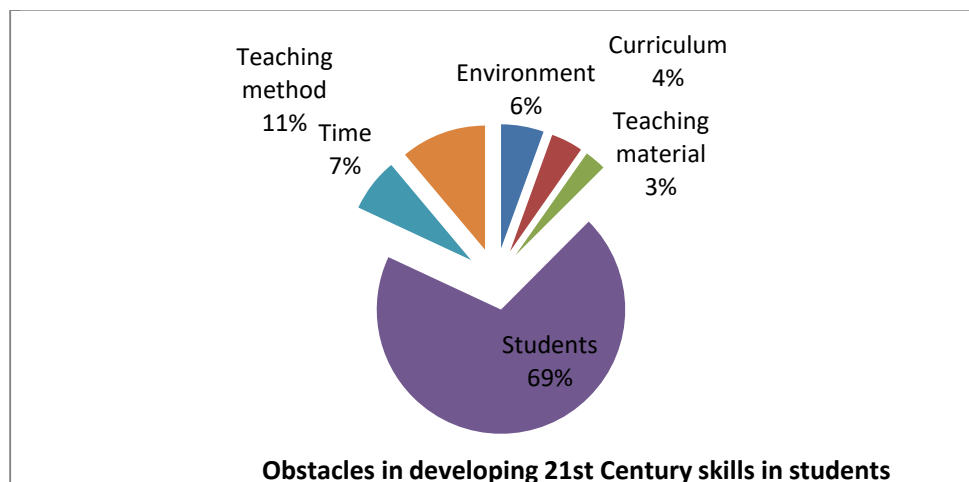


Figure (25) challenges

The requirements for developing 21st century skills in students; are also related to the teaching and learning process. As shown below in figure (26), the teachers need training, students' level, time, better environment, curriculum, internet access, 21st century teaching methods, and material.

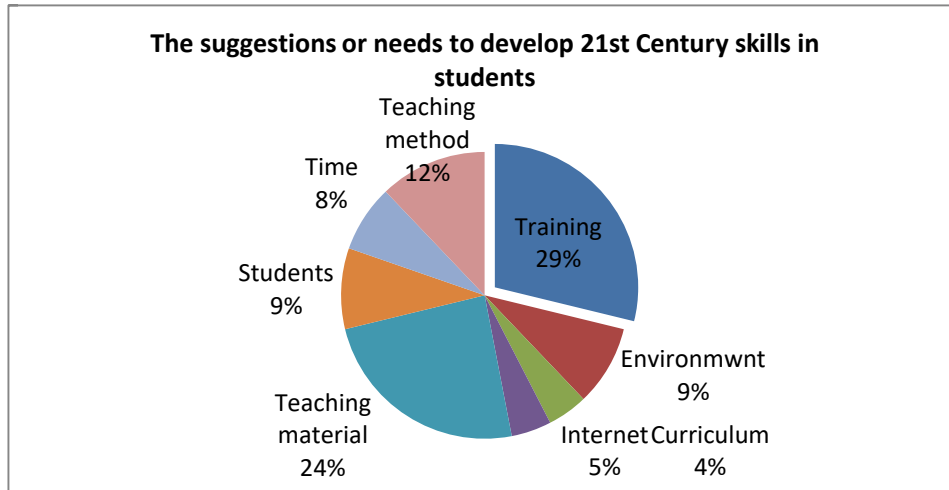


Figure (26)

4.4.2.1 Students

Students' condition makes up 69% of the obstacles. It was indicated 50 times by the teachers. Fifteen teachers stated that students' disinterest in learning hinders the development of these skills. Some of the answers: "students are not interested in studying," "students are not interested to learn new information or skill," or "students are not interested in learning a new language."

Another hindrance mentioned 15 times is that most of the students have no basics in the English language. One teacher said, "Students' low level is an issue." and another said: "75% of the students' level is below average.". At the same time, five teachers stated that individual differences are a challenge they face when teaching. One of the respondents assumed that: "Individual differences are a difficulty. You can notice students who watch English movies got good vocabulary and pronunciation." .

Two teachers pointed out that students memorize to learn. One believed that "Students do only memorize for tests." and another two assumed that "Students concentrate on the

topics of the tests.". Three teachers thought that students' shyness prevented them from participating.

Moreover, another pointed out that: "Hesitation in speaking, they are not used to react.". Other obstacles brought up only once were: students are used to MCQ in tests, cheat, and do not have a positive attitude towards language learning. They are not aware of the importance of learning English, as they struggle with putting effort and engaging in the learning process. Over and above, students lack mentoring and directing on the right path and need more attention.

Only 9% of suggestions were to do with students. One participant thought that the social specialist office would help solve the difficulties; and suggested: "the office should be activated.". "Students need to understand the importance of these skills; self-taught is the only way to go forward.", another one thought. While another three assured that encouraging and motivating students to read is one way to develop this set of skills in students. However, "Some students need extra intensive courses to reach the required level," a teacher said.

4.4.2.2 Teaching method

Only 11% of the challenges faced by the teachers were the teaching methods from their perspective. Problems mentioned, such as "Teaching English in Arabic"; accordingly, students are not used to hearing English. As well as "Students are taught to be tested.", "MCQ testing made students weak in writing and speaking," "due to the limited class time; the teaching process makes students recipients only."

Moreover, three teachers believed that "teachers are no longer passionate about teaching" as "Methods of the teachers of the early stage are to blame on the pronunciation and the reading deficiency."

12% of the suggestions offered by the teachers were about the teaching method. The communication between teachers and students must be more effective, as indicated by one teacher. "Evaluating students by presentations.", "By the application of individual and group tasks, collecting information from the internet, books or dictionaries." and another recommended "More writing and speaking questions, extra exercises to improve their language.", and "Group work to make students participate.". Four teachers insisted on choosing "More qualified teachers with appropriate teaching methods to teach the early

stages."; since primary and preparatory levels significantly impact students' status in secondary school.

4.4.2.3 Time

Four teachers pointed out that their time is limited to using new techniques. One added: "To put extra effort on some students means more time is needed."

Only five teachers wished for longer class times or more classes.

4.4.2.4 Environment

"Crowded classes" and "Lack of communication between the teachers and the students" have an awful impact on students' development of 21st century skills. Additionally, two teachers shed light on the hostile environment and the lack of school administration assistance.

However, two teachers stressed the importance of communication between teachers and parents: "Parents and teachers need to communicate more effectively.". Two more participants proposed: first, "A more positive environment for the students to perform better in class" and second, "Less crowded classes." according to one teacher, this would make the group discussions much better.

4.4.2.5 Curriculum

Only three teachers criticized the curriculum, saying that " The curriculum does not fit the Libyan mentality.", "It does not consider students' needs." and "This challenging and long curriculum is unfair to some students' abilities."

Furthermore, separate teachers suggested summarizing the curriculum, making it more balanced and suit the students' level and class time.

4.4.2.6 Teaching material

Though they agreed with the question "Lack of teaching/learning materials.", only two teachers mentioned " Lack of audio-material" and "No smart boards or data shows" as obstacles in developing these skills in students.

However, 47% answered (0:almost never) to employing technology, i.e., they are not using presentation software or media presentation in implementing 21st century practices.

Sixteen teachers emphasized 21st century classroom equipment saying that classrooms need tools such as data shows and smart boards to facilitate the delivery process.

4.4.2.7 Internet

5% of the suggestions were about using online platforms between students and teachers (since everyone has a smartphone and can access the internet). E-learning can help teachers and students gain extra time.

4.4.2.8 Training

29% of the commendations were about training. Most of them recommend attending workshops to learn these new techniques and some ask for more inspector visits to instruct them. Consequently, the teaching process will be developed and eased. Even one teacher posed to test teachers every two years to renew their teaching license; as a motivation to develop themselves.

Chapter V: Discussion of results

5.0 Introduction

Teachers are influential and significant agents for change and development in Libya. They coordinate critical activities to manage the country's educational system effectively. This study shows why mastering 21st century skills is vital for teachers, especially in a fast-changing world associated with rapid technological and economic development. In the knowledge economy, this set of skills has a place. Employers seek for employees who can "think outside the box" or show collaboration, creativity, and self-direction.

The discussion chapter aims to apply and present what was learned in the preceding section. The main goal of this chapter is to get the audience involved with the researcher's ideas and encourage group thinking. This chapter will provide an interpretation and conclusion on the implications of the findings.

Understanding the 4c's, life skills, and technological literacy are among the 21st century competencies mentioned by the researcher. On the one hand, we anticipate that Libyan secondary school teachers would be able to successfully implement the set of skills because they have been proven successful in other countries. On the other hand, we anticipate that Libyan secondary school teachers would have negative or conflicting attitudes about 21st century skills, forcing them to reconsider adopting traditional approaches to concept building.

In this chapter, the teachers' perceptions of 21st century skills will be learned, including what teachers know about 21st century skills and how they implement them, regardless of whether Libyan secondary school teachers have conveyed 21st century skills to their students; and what impediments appear to the integration of 21st century skills into curricula.

Despite significant developments in technology and 21st century skills in the Libyan educational system, it was evident that teachers' perspectives of 21st century skills and how they are implemented vary. A considerable gap in the perception and implementation of 21st century skills was identified in the quantitative survey. According to the qualitative investigation, many challenges affect teaching with knowledge, communication, and problem-solving areas experienced by teachers in Libyan secondary schools.

5.1 Teachers' implementation of the 21st century skills

The patterning of skill schedules overemphasizes some skills at the expense of others. The patterns indicated by the teachers are either well-thought-out or simply reactive due to a lack of information, training, artifacts, or knowledge. Although the data demonstrate a very imbalanced distribution of skills in frequency, where a few skills are more emphasized than others, the ability to teach a specific skill without the other is highlighted. Regarding their interdependency and the nature of these skills, teachers cannot teach one without teaching the other. For instance, students can only be creative if they collaborate and can only collaborate if they communicate. This study showed that the average implementation of all eight skills was (1.76); with less than half (2). It is important to emphasize that all eight skills are practiced only rarely. The most practiced skills were collaboration and communication. Collaboration was the highest-rated skill at 1-3 times per month; this skill includes the practice of working in teams or pairs on a problem. Communication, the second-highest mean practice for participants, might be a combination of answering questions and communicating ideas. Surprisingly, written and oral communication (such as delivering a presentation) received relatively low means. These findings suggest that collaboration skills are being implemented more frequently than other skills, which could be attributable to students' internet connections from home (working in pairs or teams and collaborating with others on projects). Furthermore, the practice with the lowest mean is global connection skills (1.05); reading about other countries or cultures appears to be lacking in developing global connection skills while learning a foreign language.

Students develop through the successful implementation of 21st century skills. These skills are intrinsically linked and built on one another; for instance, life skills development will only be achievable by developing practical communication skills; correspondingly, a creative person is self-directed and innovative. There is a need to implement the skills actively. Students and teachers should often collaborate to enhance their interaction and discussion. Collaboration is compulsory throughout the innovation process, as Fedorowicz, Laso-Ballesteros, & Padilla-Meléndez (2010) stated that Information Technology (IT) endowed collaboration within and between groups will catalyze creativity, facilitating multidisciplinary innovation.

5.2 Teacher's challenges and suggestions in developing 21st century skills in students

Interestingly enough, teachers chose to comment on students rather than necessarily the needed skills. In the interview, the teachers complained about students' low levels but disagreed with the curriculum being too complicated. In contrast, they agreed that students need individual attention and that their disinterest in learning hinders the development of these skills. Yunos (2015, as cited in Rusdin, 2018) stated that the limited strategy, technique, method, and approach led to a lack of student interest in the learning process. An indication that teachers point fingers in the wrong direction. Teaching strategy and skills play a significant role in drawing students' attention to a subject and changing their perception (Salehudin, Hassan, and Hamid, 2015, as cited in Rusdin, 2018). Students are products of the educational process, so criticizing them is justified in some cases, but blaming them for 69 percent of the obstacles is absurd.

Teachers must recognize that pedagogy, which includes concepts, techniques, and teaching methods, is essential for teaching and learning. Teachers should be able to organize and implement teaching and learning that meets the needs of implementing 21st century learning skills through efficient, engaging, and participatory pedagogy practice (Ariffin & Yunus, 2017, as cited in Rusdin, 2018). On the other hand, teachers gave neutral responses and cited "a lack of time to prepare for class or investigate new techniques."

A teacher ought to be able to make choices about improving their teaching skills. Though teachers themselves have never studied and cannot fully understand 21st century skills, they might be considered responsible for not having the required skills. Teachers should confront the challenge of dedicating time to reflect on the quality of their teaching practice (Kombo and Tromp, 2006). As Yunos (2015, as cited in Rusdin, 2018) pointed out, limiting teaching methods and techniques leads to ineffective teaching practices because they cannot correctly influence the learning process. Due to the lack of allocated resources, teachers have only learned basic lower-order thinking skills without a solid disciplinary basis and cannot teach 21st century skills. Innovative teaching strategies were suggested; Fullan and Watson (2011) support this data that new teaching methods are challenging.

The purpose of a 21st century classroom is to train students to be valuable members of society and not test their capacity to retain. The suggestions about the teaching methods

included teaching for tests or tests requiring students to recall things, which are no longer the way for students to progress. Instead, as Yunus (2015, as cited in Rusdin, 2018) found, teachers should apply various methods and techniques to teach and assess students. Teachers should measure students' achievement and needs via student projects, presentations, and other performance-based evaluations.

Teachers contribute to incorporating technology into the classroom since integrating technology allows students to learn 21st century skills such as information literacy, collaboration, and self-directed learning. (Langworthy, 2013) and (Amran & Rosli, 2017). Teachers agreed that experiencing a lack of teaching or learning materials is challenging. The interview stressed this by adding that technological, 21st century equipment such as data shows, interactive whiteboards, and smartboards are required to facilitate the delivery process, i.e., students' interaction will improve, and teachers' lesson plans will be enhanced.

Technology can help schools reduce costs on teaching materials, improve the educational program, and save time for teachers. However, technology will never be able to take the position of a teacher. Approximately half of the teachers never use technology in the classroom to teach 21st century skills, such as presentation software or media. Understanding teaching methodologies is beneficial to teachers, and having good teaching tools that engage many students helps students perform better and provide a pleasant learning environment. Even in large or crowded classrooms, digital learning technologies will help students build 21st century skills and make personalized learning more effortless in the classroom. This finding aligns with Muchlis (2015) that using technology may help big classrooms learn more effectively. To turn a problem into a solution, as Küçükler & Kodal (2019) said, teachers might apply strategies that support learning in big groups.

There is a sense of dissatisfaction and a demand for more classes or more time. Encouraging and inspiring students to read is one way to develop 21st century skills and realize their significance. According to Haensly, Lupkowski, and Edlind (1985), extracurricular activities outside of the classroom can efficiently develop 21st century skills while gaining time in the classroom. These suggestions align with Barrows (1996), who asserts that students should rely on their self-direction to choose various options based on their assessment of the available information.

The study points out how teachers emphasize the importance of communication between teachers and parents and between teachers and students. The former is aligned with

Kraft and Dougherty (2013), confirming that frequent Teacher Parent Communication promotes students' school dedication, responsibility, classroom activities, and homework completion. While online platforms may contribute to more productive communication for the latter, E-learning can allow teachers and students to obtain extra time. Buletin (2015, as cited in Rusdin, 2018) supports these suggestions and concludes that a 21st century teacher should possess specific skills such as mastering knowledge, comprehending 21st century pedagogy, observing students' progress, providing support, and employing information technology and media.

Teachers should possess the capability to teach students with a 21st century approach. Teachers' attendance of a training or workshop to learn new practices improves and simplifies the teaching process. This study highlights the need for such workshops. Furthermore, Even primary and preparatory school teachers should attend workshops since they significantly impact students' secondary school levels. These results correspond with Singapore's approach to creating 21st century teachers. By designing the Teacher Education Model for the Twenty-First Century, Singapore is implementing critical enhancements to the curriculum, pedagogy, assessment, theory-practice relations, and basic infrastructure (TE21).

5.3 Teachers' perception of the 21st century skills

The findings of research question one demonstrate that, though the teachers are unsure about 21st century skills, they agree on their appropriateness to the age and the ability to be taught and assessed.

The difficulties teachers mentioned mainly were that students face difficulties with reading. Some students can hardly express themselves clearly in English. Teachers claim that students do not possess strong English language skills. Nevertheless, they agree that the 21st century skills curriculum fosters more excellent linguistic skills and delivers the intended outcomes.

Teachers agree that 21st century skills are essential for their students' future success. However, most participants said that the most significant difficulties involved implementation due to a lack of suitable materials and resources. In other words, they complain about the lack of teaching materials and that students are not developing and improving in language as they should be. Thus, it is not shown that 21st century skills are effective. The skills are either age-inappropriate, ineffective or misunderstood.

It is good that teachers know 21st century skills and broadly understand their importance to students, but teachers need to understand how to implement them in their lessons. Nonetheless, teachers are required to meet teaching performance requirements, as students cannot reach their full potential as they should.

Teachers do not understand these skills, which is a proposition supported by the first questions. Teachers are reluctant to show the state that they need help understanding 21st century skills; even Puteh et al. (2012) added that teachers' low expertise in teaching and understanding the ideas of new curriculum renovation cause teaching weakness. For the same reason, teachers' perceptions of 21st century pedagogy practice should be nourished with creative thinking, innovative thinking, critical thinking, emphasis on problem-solving, and ability in decision-making (Osman & Basar, 2016, as cited in Rusdin, 2018).

In conclusion, the issues with the 21st century skills curriculum should not be blamed on 21st century skills themselves. There are many other factors, such as teaching materials and teaching methodologies. 21st century skills are essential today and should be implemented appropriately. Moreover, 21st century teaching materials should do more than improve students' abilities in the language.

Chapter VI: Conclusions and Recommendations

6.1 Summary

This thesis investigates the perspectives and implementations of 21st century skills by Libyan 1st year secondary school teachers and the challenges and obstacles they face. The main research questions are a) How do Libyan secondary school teachers perceive 21st century skills? b) To what extent are the teachers implementing 21st century skills into their teaching? c) What challenges or obstacles confront teachers in implementing 21st century skills?

Forty teachers from twenty different schools in Tripoli participated in the survey. The researcher developed teachers' questionnaires and interviews to find answers to the research questions mentioned above.

Teachers are reluctant to admit that they lack knowledge of 21st century skills and do not know how to put them into practice. Teachers are aware of 21st century skills and have a thorough awareness of their value to students. They agree that 21st century skills are crucial for their student's future success and that a 21st century curriculum develops better linguistic skills and delivers desired outcomes.

Teachers rarely practice all eight skills when implementing 21st century skills. Collaboration and communication are the "most practiced" skills, whereas global connections are the least practiced. Teachers' practices are either methodical and well-thought-out or simply reactive due to a lack of material, training, or comprehension.

Regarding the challenges and obstacles, teachers mainly chose to comment on students rather than the needed skills. Though they complained about students' low levels; they disagreed with the level of the curriculum being overly complicated; that students need individual attention, and that their disinterest in learning hinders the development of these skills.

Due to a lack of resources and training, teachers lack innovative ways to improve and simplify the teaching process. Furthermore, early-stage teachers lack methods for developing 21st century skills and teaching for tests or tests requiring students to recall things; their impact is significantly shown on students' secondary school levels. In addition to the teachers'

and parents' communication and teachers' and students' communication, which promotes students' school dedication, responsibility, and classroom activities, are underestimated.

The absence of good teaching tools, such as PowerPoint presentations or interactive whiteboard lessons, to engage a broad range of students impedes the developing of information literacy, collaboration, and self-directed learning. Moreover, technology can solve issues and bolster educational programs to address the sense of dissatisfaction and the largely-unmet demand for more classes.

It is a combined process; the teacher, the student, and the curriculum should be organized systematically to meet the educational objectives. Thus, difficulties in implementing the 21st century skills curriculum should not be attributed to the curriculum itself. Only by implementing intrinsically related and reciprocal 21st century skills can students effectively develop.

6.2 Recommendations

An essential part of being a teacher is continuously improving oneself to be a better teacher for their students. A teacher's learning experience never stops for a profession dedicated to teaching. Teachers are the most grateful benefactors of this saying: We learn something new every day.

Unfortunately, not all teachers have the skills to teach new classrooms and introduce innovative programs. However, a good teacher in this context has accumulated the skills necessary because he decided to continue improving teaching according to the 21st century approach - especially because the purpose of a 21st century classroom is to teach students to be valuable members of society.

Many teachers lack training and learn on their own. Attending workshops can improve their teaching performance, knowledge, and skills and learn new approaches. Moreover, to maximize the effectiveness of teacher workshops. Teachers can and should interact and share all appropriate information with their fellow teachers, participating in the discussion and giving each other reviews and advice. Ultimately, this program will create more qualified teachers who can teach our children more effectively and adequately in line with modern standards.

Teaching is a dynamic profession that requires a passion for the subject matter and an ability to stay in touch with new developments. Teachers should strive to make education

more entertaining and interactive. The Faculty of Education must be given the heavy responsibility of occasionally providing teachers with training or workshops to maintain academic excellence.

The Faculty of Education should support teacher professional development by proposing a performance-based incentives framework for teachers that sets apart those who deserve higher pay from those who do not. Consequently, the Ministry of Education rewards teachers for the most effective teaching methods. With the right promotion system and incentives, teachers might become more excited about learning and teaching. Teachers would innovate and create new ways to teach students and surpass their country's standards.

Requiring all students to take an annual test at the beginning of the school year adds value to students' learning and provides baseline data for teachers and schools. After a prolonged summer vacation, the previous year's test results become less relevant or up-to-date. Teachers have the right to evaluate their students at the beginning of the school year to understand individual differences better and identify the shortcomings and gaps in students' understanding with higher resolution.

The researcher recommends a diagnostic test to help teachers administer assessments. The assessment results should indicate the students' type of supplemental support and intensity. Teachers will better understand their students' strengths and weaknesses and "forgotten" content. When designing diagnostic tests, teachers need to pay attention to students' thinking and information processing skills and development deficiencies since unqualified diagnostic tests may result in poor learning effects rather than fundamentally improving learning effects. Accordingly, students can catch up at these levels to keep up with increasing class difficulty by carefully exploring homework. If the school wishes, they can provide an after-school program or contact parents for additional support for the student.

Teachers should consider extra-curricular activities such as writing skills in school journals to foster 21st century skills. Writing skills have a significant positive impact on critical thinking and analysis. These skills help students effectively express themselves in all formats and are vital in today's workforce. Furthermore, writers also learn how to plan and organize their thoughts effectively. Eventually, this allows them to complete tasks faster and more efficiently as it promotes language and provides a natural context to foreign language learners.

The 21st century classroom is a digitally networked classroom where students use internet tools to access knowledge. 21st-century skills are essential for engaging learners in today's digital society and helping students prepare for real-world challenges and careers.

The first step toward creating effective 21st century classrooms is identifying the teachers who will teach the new curriculum. They should be skilled in using Information and Communication Technologies (ICT) and comfortable with a unique pedagogical approach; to ensure that teachers – the carrier of the 21st century skills – acquire an appropriate level of competence in teaching and implementing them. They should attend workshops on how to teach the new curriculum (using the latest teaching method) and successfully implement 21st century skills. This way, teachers will significantly change their pedagogical work and have the necessary tools and knowledge. When they return to their teaching duties, they will be better prepared to deal with a new education system and be comfortable applying their newly gained knowledge into practice. This training will be necessary during their professional career, and there should be a follow-up to ensure they have implemented these new skills into practical use.

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List of Appendices

Appendix A

Teachers' questionnaire

This survey sheds light on teaching practices you may have used that support students' learning of 21st century skills.

Please note that there are no correct or incorrect answers and all individual responses are kept completely confidential.

Gender:	Male	Female		
Age:	under 25	25-34	35-44	45-54 55-65
Years of experience:	Less than 5		More than 5	

1. The teacher's subjective perception/opinion of the 21st century skills

	S D	D	N	A	S A
I believe that 21st century skills are vaguely defined.					
I believe that 21st century skills are age-appropriate					
I believe that 21st century skills can be taught.					
I believe that 21st century skills can be fairly and easily be assessed.					
I believe that 21st century skills' curriculum foster greater linguistic skills.					
I believe that 21st century skills' curriculum is effective in delivering the intended outcomes					

2. Teaching practices which develop the 21st century skills

In your teaching practice, how often do you ask your students to do the following ?

	Almost never	A few times a semester	1-3 times per month	1-3 times per week	Almost daily
Prepare and deliver an oral presentation to the teacher or others					
Answer questions in front of an audience.					
Study information about other countries or cultures.					
Use information or ideas that come from people in other countries or cultures					
Choose their own topics of learning or questions to pursue					
Plan the steps they will take to accomplish a complex task.					
Work in pairs or small groups to complete a task together					
Work as a team to incorporate feedback on group tasks.					
Compare information from different sources before completing a task or assignment.					
Summarize or create their own interpretation of what they have read or been taught					
Use technology or the Internet for self-instruction (videos tutorials, self-instructional websites, etc.).					
Use technology to help them share information (e.g., multi-media presentations using sound or video, presentation software, blogs, podcasts, etc					
Use idea creation techniques such as brainstorming or concept mapping.					
Generate their own ideas about how to confront a problem or question.					
Investigate topics or issues that are relevant to their family or community.					
Apply what they learn to local situations, issues or problems.					

3. What are the obstacles in adopting 21st century teaching practices?

SD: Strongly Disagree D: Disagree N: Neutral A: Agree SA: Strongly Agree

Challenges	SD	D	N	A	SA
Curriculum content is too much (quantity)					
Curriculum content is too difficult (level)					
Lack of teaching/learning materials					
Students need more individual attention					
Not enough time to prepare for the class					
Not enough time for researching new teaching materials/techniques					
No resources allocated for learning new teaching techniques					

Appendix B

Teacher Interview Questions

1- What are the difficulties you face in developing these set of skills in students?

2- Please elaborate on what needs to be done to effectively develop 21st century skills in students?