



THE REPUBLIC OF TURKEY
NECMETTİN ERBAKAN UNIVERSITY
INSTITUTE OF EDUCATIONAL SCIENCES



The Department of Foreign Language Education
English Language Teaching Program

Master Thesis

**AWARENESS ON 21ST CENTURY SKILLS
TWO SIDES OF A COIN: PROSPECTIVE TEACHERS OF ENGLISH AND
TEACHER TRAINERS OF ENGLISH**

Nida Nur IŞIK
ORCID: 0000-0001-7901-5456

Advisor
Assist. Prof. Dr.Emine Eda ERCAN DEMİREL
ORCID: 0000-0001-7686-1550

Konya – 2023

ACKNOWLEDGEMENT

Foremost, I would like to express my deepest gratitude, endless love and respect to my esteemed advisor Assist. Prof. Dr. Emine Eda ERCAN-DEMİREL for her invaluable support and guidance, believing in me, encouragement, endless patience and understanding, and kind and motivating attitude throughout my study. Her guidance and advice had a great influence on my study and shed light on my long way. Without her guidance and support, I could not pave my way to success.

I am grateful to my committee members Prof. Dr. Arif SARIÇOBAN, Assist. Prof. Dr. Mustafa Serkan ÖZTÜRK, and Assist. Prof. Dr. Cemile DOĞAN for their invaluable insights on this dissertation. It was an honour to meet and work with you.

I am also thankful to my esteemed lecturer Assoc. Prof. Dr. Galip KARTAL for his endless support, encouragement, and belief that I can always achieve the better.

I owe the most special thanks to my beloved family for their deepest love, patience, support, understanding, and trust in me from the beginning of my school career. And I owe much to my dear friends Hayriye YİĞİT and Z. Selin SÖZEN for always being with me from our childhood, and Zeliha MERMER and Afife GÜLVEREN with whom we carry out our work together and support each other in this period.

Last but not least, I would like to thank each of my lecturers whose ideas and experiences I have consulted throughout my undergraduate and graduate education, and all the participants who helped me to collect data in this study.

Nida Nur IŞIK

August 2023

TABLE OF CONTENTS

ACKNOWLEDGEMENT	ii
TABLE OF CONTENTS	iii
LIST OF TABLES	vi
TEZ ÇALIŞMASI ORJİNALLİK RAPORU	viii
BİLİMSEL ETİK BEYANNAMESİ	ix
ICONS AND ABBREVIATIONS	x
ÖZET	xii
ABSTRACT	xiii
1. INTRODUCTION	1
1.1. Problem Statement	1
1.2. Purpose of the Study.....	3
1.3. Significance of the Study	4
1.4. Assumptions	4
1.5. Limitations.....	4
1.6. Definitions of Key Terms.....	5
2. LITERATURE REVIEW	6
2.1. 21st Century	6
2.2. 21st Century Skills	7
2.2.1. Classifications of 21st century skills	9
2.2.2. Sub-dimensions of 21st century skills.....	17
2.3. The Significance of 21st Century Skills in ELT	22
2.4. Awareness	24
2.4.1. Awareness in the Field of Education.....	24
2.4.2. 21st Century Skills Awareness.....	25
2.5. Previous Studies	26
2.5.1. Research conducted in Turkiye	26
2.5.2. Research conducted abroad	35
3. METHOD	38
3.1. Research Design	38
3.2. Participants	38
3.3. Data Collection Tools and Techniques	40
3.3.1. 21st century skills and competences scale	41
3.3.2. Semi-structured interview	42
3.4. Data Collection.....	43
3.5. Data Analysis	44

4. FINDINGS	45
4.1. Findings on PTEs’ Awareness Levels on their 21st Century Skills.....	45
4.1.1. Frequency and percentage values of PTEs’ awareness levels on their 21st century skills by median.....	45
4.1.2. Independent samples T-test results of PTEs’ awareness levels on their 21st century skills in terms of “gender”	46
4.1.3. Independent samples T-test results of PTEs’ awareness levels on their 21st century skills in terms of “grade”	47
4.1.4. One-way variance analysis of PTEs’ awareness levels on their 21st century skills in terms of “monthly income level”	48
4.2. Findings on TTEs’ Awareness Levels on their 21st Century Skills.....	48
4.2.1. Frequency and percentage values of TTEs’ awareness levels on their 21st century skills by median.....	49
4.3. Findings on PTEs’ Perceptions about their Awareness on 21st Century Skills...	49
4.3.1. The significance of 21st century skills in ELT	50
4.3.2. The most effective 21st century skills in ELT	51
4.3.3. Self-awareness on 21st century skills.....	54
4.3.4. Personal development in 21st century skills	55
4.3.5. Effectiveness of curriculum courses, KPSS exam, and internship	57
4.3.6. 21st century skills in course contents	60
4.3.7. Courses in which 21st century skills are taught more effectively.....	61
4.3.8. Courses to be added to the ELT curriculum.....	65
4.4. Findings on TTEs’ Perceptions about their Awareness on 21st Century Skills...	68
4.4.1. The significance of 21st century skills in ELT	68
4.4.2. The most effective 21st century skills in ELT	69
4.4.3. Self-awareness on 21st century skills.....	71
4.4.4. Personal development in 21st century skills	72
4.4.5. Courses they taught mainly in the department.....	73
4.4.6. Use of 21st century skills in courses	75
4.4.7. Self-criticism about integrating 21st century skills into courses.....	77
4.4.8. The significance of PTEs’ awareness on 21st century skills	78
4.4.9. Efforts to increase PTEs’ awareness of 21st century skills.....	78
5. DISCUSSION	80
5.1. Discussion	80
5.1.1. Discussion on the first research question of the study	80
5.1.2. Discussion on the second research question of the study.....	83
5.1.3. Discussion on the third research question of the study	83
6. CONCLUSION AND SUGGESTIONS	89
6.1. Conclusion.....	89
6.2. Suggestions.....	90
6.2.1. Suggestions for field experts	91

6.2.2. Suggestions for further studies for researchers	91
GENİŞLETİLMİŞ TÜRKÇE ÖZET	93
REFERENCES	96
APPENDICES	102



LIST OF TABLES

Table 2.1. Comparison of 21st Century Skills Classifications	9
Table 2.1. Cont. Comparison of 21st Century Skills Classifications.....	10
Table 2.1. Cont. Comparison of 21st Century Skills Classifications.....	11
Table 2.1. Cont. Comparison of 21st Century Skills Classifications.....	12
Table 2.2. Sub-dimensions of 21st Century Skills.....	17
Table 3.1. Frequency and Percentage Values of PTE’s by Sociodemographic Characteristics	38
Table 3.1. Cont. Frequency and Percentage Values of PTE’s by Sociodemographic Characteristics	39
Table 3.2. Frequency and Percentage Values of TTE’s by Sociodemographic Characteristics	40
Table 4.1. Frequency and percentage values of PTEs’ awareness levels on their 21st century skills by median.....	45
Table 4.2. Normality test results in terms of “gender”.....	46
Table 4.3. Independent samples T-test results of PTEs’ awareness levels on their 21st century skills in terms of “gender”	46
Table 4.4. Normality test results in terms of “grade”.....	47
Table 4.5. Independent samples T-test results of PTEs’ awareness levels on their 21st century skills in terms of “grade”	47
Table 4.6. One-way variance analysis of PTEs’ awareness levels on their 21st century skills in terms of “monthly income level”	48
Table 4.7. Frequency and percentage values of TTEs’ awareness levels on their 21st century skills by median.....	49
Table 4.8. Main themes on PTEs’ perceptions about their awareness on 21st century skills.	50
Table 4.9. Sub-themes regarding PTEs’ responses on the significance of 21st century skills in ELT.....	50
Table 4.10. Sub-themes regarding PTEs’ responses on the most effective 21st century skills in ELT.....	51
Table 4.11. Sub-themes regarding PTEs’ responses on their self-awareness on 21st century skills.	54

Table 4.12. Sub-themes regarding PTEs’ responses on their personal development in 21st century skills.....	55
Table 4.13. Sub-themes regarding PTEs’ responses on the effectiveness of curriculum courses, KPSS exam, and internship.....	58
Table 4.14. Sub-themes regarding PTEs’ responses on the 21st century skills in course contents.....	60
Table 4.15. Sub-themes regarding PTEs’ responses on the courses in which 21st century skills are taught more effectively.	62
Table 4.16. Sub-themes regarding PTEs’ responses on the courses to be added to the ELT curriculum.....	65
Table 4.17. Main themes on TTEs’ perceptions about their awareness on 21st century skills.....	68
Table 4.18. Sub-themes regarding TTEs’ responses on the significance of 21st century skills in ELT.....	68
Table 4.19. Sub-themes regarding TTEs’ responses on the most effective 21st century skills in ELT.....	70
Table 4.20. Sub-themes regarding TTEs’ responses on self-awareness on 21st century skills.....	71
Table 4.21. Sub-themes regarding TTEs’ responses on personal development in 21st century skills.....	72
Table 4.22. Sub-themes regarding TTEs’ responses on the courses they taught mainly in the department.....	74
Table 4.23. Sub-themes regarding TTEs’ responses on their self-criticism about integrating 21st century skills into courses.....	77

TEZ ÇALIŞMASI ORJİNALLİK RAPORU

Awareness on 21st Century Skills Two Sides of a Coin: Prospective Teachers of English and Teacher Trainers of English başlıklı tez çalışmamın toplam **98** sayfalık kısmına ilişkin, 1/08/2023 tarihinde tez danışmanım tarafından **Turnitin** adlı intihal tespit programından aşağıda belirtilen filtrelemeler uygulanarak alınmış olan orijinallik raporuna göre, tezimin benzerlik oranı **%22** olarak belirlenmiştir.

Uygulanan filtrelemeler:

1. Tez çalışması orijinallik raporu sayfası hariç
2. Bilimsel etik beyannamesi sayfası hariç
3. Önsöz hariç
4. İçindekiler hariç
5. Simgeler ve kısaltmalar hariç
6. Kaynaklar hariç
7. Alıntılar dahil
8. 7 kelimedenden daha az örtüşme içeren metin kısımları hariç

Necmettin Erbakan Üniversitesi Tez Çalışması Orijinallik Raporu Uygulama Esaslarını inceledim ve tez çalışmamın, bu uygulama esaslarında belirtilen azami benzerlik oranının (%30) altında olduğunu ve intihal içermediğini; aksinin tespit edileceği muhtemel durumda doğabilecek her türlü hukuki sorumluluğu kabul ettiğimi ve yukarıda vermiş olduğum bilgilerin doğru olduğunu beyan ederim.

1/08/2023

Nida Nur IŞIK

Dr. Öğr. Üyesi E. Eda ERCAN DEMİREL

BİLİMSEL ETİK BEYANNAMESİ

Bu tezin tamamının kendi çalışmam olduğunu, planlanmasından yazımına kadar tüm aşamalarında bilimsel etiğe ve akademik kurallara özenle riayet edildiğini, tez içindeki bütün bilgilerin etik davranış ve akademik kurallar çerçevesinde elde edilerek sunulduğunu, ayrıca tez hazırlama kurallarına uygun olarak hazırlanan bu çalışmada başkalarının eserlerinden yararlanılması durumunda bilimsel kurallara uygun olarak atıf yapıldığını ve bu kaynakların kaynaklar listesine eklendiğini beyan ederim.

1/08/2023

Nida Nur IŞIK

ICONS AND ABBREVIATIONS

Icons

f : Frequency

N: Number

%: Percentage

\bar{x} : Arithmetic Mean

SD: Standard Deviation

SE: Standard Error

P: Probability

Df: Degree of Freedom

Abbreviations

ATCS: Assessment & Teaching of 21st Century Skills

C&RT: Classification and Regression Tree

CoHE: Council of Higher Education

EFL: English as a Foreign Language

ELL: English Language and Literature

ELT: English Language Teaching

ICT: Information and Communication Technology

ISTE: International Society for Technology in Education

MONE: Ministry of National Education

NCREL: North Central Regional Educational Laboratory

NRC: The American National Research Council

OECD: The Organization for Economic Cooperation and Development

P21: Partnership for 21st Century Skills

PTE: Prospective Teachers of English

TAL: Thinking, Acting and Living

TP21CLC: Teachers' Perceptions of 21st Century Learning Competencies

TTE: Teacher Trainers of English

UNESCO: United Nations Educational, Scientific and Cultural Organization

ÖZET

Necmettin Erbakan Üniversitesi, Eğitim Bilimleri Enstitüsü
Yabancı Diller Eğitimi Anabilim Dalı
İngiliz Dili Eğitimi Bilim Dalı
Yüksek Lisans Tezi

21. YÜZYIL BECERİLERİ HAKKINDA FARKINDALIK BİR MADALYONUN İKİ YÜZÜ: İNGİLİZCE ÖĞRETMEN ADAYLARI VE İNGİLİZCE ÖĞRETMEN EĞİTİCİLERİ

Nida Nur IŞIK

Bu çalışma ile, İngilizce öğretmeni adayları ve İngilizce öğretmeni eğitimcilerinin 21. yüzyıl becerilerine yönelik farkındalık düzeylerinin araştırılması ve katılımcıların 21. yüzyıl becerilerine yönelik farkındalıklarına ilişkin algılarının incelenmesi amaçlanmıştır. Karma desende yürütülen bu çalışma, Konya ilinde bulunan Necmettin Erbakan Üniversitesi İngilizce Öğretmenliği lisans programında 2022-2023 eğitim-öğretim yılında öğrenim gören 63 3. ve 104 4. sınıf olmak üzere toplam 167 İngilizce öğretmeni adayıyla ve bölümde aktif bir şekilde ders veren tüm (8) İngilizce öğretmeni eğitimcileri ile gerçekleştirilmiştir. Araştırmanın nicel verileri 'Öğrenme ve Yenilenme Becerileri', 'Yaşam ve Kariyer Becerileri' ve 'Bilgi, Medya ve Teknoloji Becerileri' olmak üzere üç alt boyuttan oluşan 'Öğretmen Adaylarına Yönelik 21. yüzyıl Becerileri Yeterlilik Algıları Ölçeği' kullanılarak; nitel verileri ise nicel verileri doğrulama amacıyla araştırmacı tarafından uzman görüşü alınarak hazırlanmış olan yarı-yapılandırılmış açık uçlu röportaj soruları kullanılarak toplanmıştır. İngilizce öğretmeni adaylarıyla yapılan röportaj için amaç doğrultusunda dört farklı odak grubu oluşturulmuş ve her bir grupta beşer kişi olmak üzere 20 İngilizce öğretmeni adayı ile toplu çevrimiçi görüşmeler yapılmıştır. İngilizce öğretmeni eğitimcileri ile yapılan röportaj için ise rastgele 4 kişi seçilmiş ve görüşmeler bireysel olarak çevrimiçi yapılmıştır. Ölçek aracılığıyla toplanan nicel veriler SPSS 26.0 paket programı aracılığıyla analiz edilirken, yarı-yapılandırılmış açık uçlu röportaj soruları aracılığıyla toplanan nitel veriler içerik analizi yöntemi kullanılarak analiz edilmiştir. Araştırmanın sonuçları İngilizce öğretmeni adaylarının 21. yüzyıl becerilerine yönelik farkındalık düzeylerinin ortalama düzeyde olduğunu, İngilizce öğretmeni adaylarının 21. yüzyıl becerilerine yönelik farkındalık düzeyleri ile cinsiyet ve aylık gelir düzeyi değişkenleri arasında anlamlı bir fark olmadığını, fakat İngilizce öğretmeni adaylarının 21. yüzyıl becerilerine yönelik farkındalık düzeyleri ile sınıf seviyeleri arasında anlamlı bir fark olduğunu ortaya koymuştur. Buna göre, 4. sınıfta okuyan İngilizce öğretmeni adaylarının 21. yüzyıl becerilerine yönelik farkındalık düzeyleri 3. sınıfta okuyan İngilizce öğretmeni adaylarının 21. yüzyıl becerilerine yönelik farkındalık düzeylerinden daha yüksek bulunmuştur. Ayrıca, İngilizce öğretmeni eğitimcilerinin de 21. yüzyıl becerilerine yönelik farkındalık düzeylerinin ortalama düzeyde olduğu sonucuna ulaşılmıştır.

Anahtar Kelimeler: 21. yüzyıl becerileri, farkındalık, İngilizce öğretmeni adayları, İngilizce öğretmeni eğitimcileri

ABSTRACT

Necmettin Erbakan University, Graduate School of Educational Sciences
Department of Foreign Language Education
English Language Education Program
Master Thesis

AWARENESS ON 21ST CENTURY SKILLS TWO SIDES OF A COIN: PROSPECTIVE TEACHERS OF ENGLISH AND TEACHER TRAINERS OF ENGLISH

Nida Nur IŞIK

With this study, it is aimed to investigate the 21st century skills awareness levels of prospective teachers of English and teacher trainers of English and to examine the perceptions of participants about their awareness on 21st century skills. This study, which was carried out in a mixed design, was carried out with 63 3rd and 104 4th grades, a total of 167, prospective teachers of English studying in English Language Teaching undergraduate program of Necmettin Erbakan University in Konya in the 2022-2023 academic year, and all (8) teacher trainers of English currently teaching in English Language Teaching department at Necmettin Erbakan University. Quantitative data of the research were used by using the '21st Century Skills Efficiency Perceptions Scale for Teacher Candidates' consisting of three sub-dimensions as 'Learning and Renewal Skills', 'Life and Career Skills', and 'Knowledge, Media, and Technology Skills'; qualitative data of the research were collected by using a semi-structured interview including open-ended questions prepared by the researcher by taking and expert opinion in order to validate the quantitative data. Four different focus groups, including five prospective teachers of English in each group, were formed purposely for the interview which was conducted online with 20 prospective teachers of English. Besides, for the interview, which was conducted with teacher trainers of English, 4 teacher trainers of English were randomly selected, and the interviews were conducted online individually. While the quantitative data collected through the scale were analysed through the SPSS 26.0 package program, the qualitative data collected through a semi-structured interview including open-ended questions were analysed using the content analysis method. The results of the study showed that 21st century skills awareness levels of prospective teachers of English were at a moderate level, and there were no significant differences between 21st century skills awareness levels of the prospective teachers of English and gender and monthly income level variables, however, there was a significant difference between 21st century skills awareness levels of the prospective teachers of English and grade levels. That is, the 21st century skills awareness levels of the 4th-grade prospective teachers of English were found to be higher than the 21st century skills awareness levels of the 3rd-grade prospective teachers of English. It was also concluded that 21st century skills awareness levels of teacher trainers of English were at a moderate level.

Keywords: 21st century skills, awareness, prospective teachers of English, teacher trainers of English

CHAPTER 1

1. INTRODUCTION

In this part of the study, problem statement, purpose of the study, significance of the study, assumptions, limitations, and definitions are presented.

1.1. Problem Statement

21st century is a century in which political, economic, social, cultural, and technological changes are happening at a rapidly increasing rate. That is, from the point of professional life, civic engagement, and self-actualization, the skills required in the 21st century are very different from those required in the previous century (Tican & Deniz, 2018). For example, in this century, humanity continues to witness ground-breaking scientific developments in fields such as artificial intelligence, robotics, space science, and much more. And, the generation born into and growing up with this rapidly and continuously increasing age along with its effects either positive or negative needs to be fulfilled with new competencies and skills called the '21st Century Skills' (Irgatoğlu & Pakkan, 2020).

21st century skills that students need in an educational context include critical thinking, problem-solving, communication and collaboration, creativity, self-efficacy, initiative and self-direction, innovation, metacognition, planning, flexibility and adaptability, productivity, information- media and technology literacy (Ciğerci, 2020), reasoning, self-regulation (Ahonen & Kinnunen, 2014), digital information literacy, collaborative and complex problem solving (Geisinger, 2016), Information and Communication Technology (ICT) literacy (Ainley et al., 2016), decision making, global awareness, global citizenship, leadership, responsibility, citizenship literacy, lifelong learning (Koçak & Göksu, 2020). The skills of the 21st century include performance as well as comprehension and knowledge, not just skill or knowledge alone (Kan & Murat, 2018). So, 21st century skills can be defined as the combination of the knowledge, skill, and literacy necessary for being successful and competent both in the work life and daily life of individuals (Partnership for 21st Century Learning (P21), 2019). Therefore, in this century we live, it is crucial for all individuals to have these skills to adapt to life in general. In order to gain these skills, schools, which are described as education centers, must be able to provide education effectively, keep up with the times, follow innovations, developments and changes, and most importantly, be role

models for students. That is, to achieve these goals, the greatest responsibility here belongs to educators.

There is a fact that the rapidly and continuously developing world we live in this era has changed the nature of learning. The traditional understanding of education, which was limited to certain periods of the individual's life, has been replaced by the contemporary understanding of education, constructivism, which accepts that education is a lifelong process. According to constructivism, since each one's life is different, knowledge is not independent of the individual (Gelen, 2020). Thus, the purpose of education, the role of teachers, the role of students, learning-teaching methods and techniques, and learning styles have changed accordingly. For instance, while there was teacher-centred education in which the teacher is seen as superior to the student in traditional education, student-centred education in which the teacher acts together with the student has started to be implemented, therefore, the aim of the teacher-centred education to transfer the knowledge and skills to the students has been replaced by the aim of developing the personality of the students. Understanding and comprehension have taken the place of memorization; the student has been changed from a passive information-taker to an active learner; the cognitive approach has taken the place of the behavioural approach; not only the cognitive domain of the students but also the affective and psychomotor domains of the students have begun to be taken into consideration; the view that every student is equal has been replaced by the principle of respect for individual differences. Therefore, countries need educators and teachers who have improved their skills and who are able to educate students to be competent with using their skills if they are to adapt to the changing world and emerging new skill areas, and train citizens equipped with 21st century skills (Ciğerci, 2020). Thus, education systems of countries around the world have been updated as the way including 21st century skills, and some have still been updating. Turkiye is one of the countries which has been updating its teaching programs and curricula by doing necessary changes for all levels from preschool education to higher education.

There are many research studies on updating curricula to fulfill the needs this era has brought and investigating how to make necessary changes on it. Obviously, it is possible to say that some of them have been done to assist the faculties of education in updating their teacher education courses (İrgatoğlu & Pakkan, 2020). Thanks to these studies, most of the universities in Turkiye have made required changes on their teacher education programs.

In this regard, it can be expected that teacher trainers of English (TTEs) teaching in education faculties of universities in accordance with the updated education programs according to the needs of the 21st century, and prospective teachers of English (PTEs) taking lessons from them should have an awareness on the 21st century skills. However, more specifically, our focus being ELT, neither TTEs' nor PTEs' levels of their awareness on 21st century skills have been investigated thoroughly yet. Therefore, this study is thought to shed light on the levels of awareness on the 21st century skills of the TTEs who will continue to teach and train new teachers in higher education in this era, and the PTEs they train, who will be teaching the new generations.

1.2. Purpose of the Study

In the century we live, the rapid and continuously increasing changes in political, economic, social, cultural, and technological aspects have made it necessary for the people of our age to have some abilities in order to adapt to this era. Unlike the previous century, when having a certain level of knowledge on any given subject was considered acceptable and sufficient, the 21st century has demanded that people acquire new skills in order to keep up with the rapid changes and advancements and apply those skills to their daily lives (Ciğerci, 2020). These abilities have been gathered under the title of 21st century skills, and included skills such as creativity, innovation, critical thinking, digital literacy, communication, collaboration, and so on. To provide these skills to both new-borns and students who continue to receive education in schools, countries have been updating their education programs and curricula to meet the needs of the new age. Among the updated education programs, there are education faculties of universities that train prospective teachers. Therefore, it is possible to say that all the changes in the 21st century directly or indirectly affect the education systems and education policies of the countries. However, the awareness level of 21st century skills of PTEs and TTEs is yet much unknown. In this context, with this study, it will be aimed to investigate the 21st century skills awareness levels of the PTEs and the TTEs who continue to train them in the education faculties of the universities and examine perceptions of the participants about their awareness on 21st century skills.

In this context, answers to the following questions, which are the main problems of the research, are sought in this study:

1. Are the PTEs aware of 21st century skills?
2. Are the TTEs teaching in ELT department aware of 21st century skills?

3. What are the perceptions of the participants about their awareness on 21st century skills?

1.3. Significance of the Study

The 21st century skills have recently led to many reforms in the educational systems of several nations throughout the world (Irgatoğlu & Pakkan, 2020). Even if the education programs and curricula have been updated according to the needs and requirements of the century, it cannot be thought that teacher trainers will be able to train qualified and effective teachers and teachers will be able to fully teach these skills to their students who continue their education life if they have low awareness on the mentioned skills. In this way, countries that are not aware of the skills required by the century they live in and cannot implement them in their education programs will not be able to acquire these skills which have become a necessity, and therefore will not be able to adapt to the age they live in. So, they will become a lagging country in every aspect. For this reason, it is crucial for the future of countries and individuals to investigate the awareness levels of PTEs and TTEs on 21st century skills, and to examine the perceptions of the participants about their awareness on 21st century skills.

Results have been shared by some research studies on this subject in different contexts, with different age groups, and in different fields; however, the relation between PTEs' and TTEs' awareness on 21st century skills have not been thoroughly investigated yet. This study will be conducted with the aim of investigating 21st century awareness levels of PTEs and TTEs in the education faculty of a state university. Therefore, this research is thought to shed light on the gap in the field and contribute to the studies done on 21st century skills. In addition, it is thought that this study will raise and develop awareness on the 21st century skills of PTEs and TTEs, minimize the difference between theory and practice, and guide educators and curriculum designers who want to teach 21st century skills to the students and improve their awareness on these skills.

1.4. Assumptions

1. All data collected through the inventory used is assumed to reflect the truth.
2. No external factor is assumed to affect the answers given by the participants.

1.5. Limitations

This research is limited to:

1. 167 prospective teachers of English studying in the 3rd and 4th-grades at Necmettin Erbakan University, department of ELT in the 2022-2023 academic year,
2. All (8) teacher trainers of English currently working in the department of ELT at Necmettin Erbakan University,
3. Interviews conducted with 20 purposefully selected PTEs and randomly selected 4 TTEs.

1.6. Definitions of Key Terms

21st Century Skills: Core competencies including skills such as creativity, communication, collaboration, critical thinking, risk-taking, and problem-solving.

English Language Teaching: The teaching of English as a foreign language to people whose first language is not English, speakers of other languages.

Teacher Trainer: An expert who organizes teaching activities in a planned and programmed way in line with predetermined goals and objectives in educational institutions of universities and teaches the necessary skills one needs to be a teacher.

Prospective Teacher: A person who is trained by teacher trainers to be able to do teaching profession.

Awareness: It is the skill of knowing, perceiving, and sensing the events that occur around a living thing. It means ‘to be conscious of something’.

CHAPTER 2

2. LITERATURE REVIEW

In this part of the study, what 21st century is, what the 21st century skills are, classifications of 21st century skills, sub-dimensions of 21st century skills, the significance of 21st century skills in ELT, 21st century skills awareness in ELT, and the previous studies conducted both in Turkiye and abroad are mentioned.

2.1. 21st Century

Changes and developments are necessary and inevitable wherever human beings exist since the needs, expectations, lifestyles, and living conditions have changed over time as it has also been understood from the past to the present. Human beings need to keep up with these changes and developments, fulfill the requirements that age brings, and respond to new needs accordingly. That's why, from the earliest times of existence, human beings have worked to optimize their lives, sought solutions to the problems they encountered, and as a result, designed the environment they live in (Doğu, 2022). Otherwise, it becomes almost impossible for human beings to survive in the age they live in.

Since ancient times, human beings have always produced outputs such as technological products and works of art, and have used their creative thinking skills while producing (Keleşoğlu & Kalaycı, 2017). Just like in other centuries, changes and developments have been inevitable in the 21st century. It can be said that the 21st century is substantially different from the previous century and this difference is mostly attributable to the introduction of extremely sophisticated information and communication technologies. The scientific and technological developments in the 21st century, the coexistence of people with different cultures and the sharing of the same work area, economic, political, social and cultural impact of problems such as wars and natural disasters, make it necessary for individuals to adapt to these -similar- situations (Gürültü et al., 2019). In addition, in this century we still live, political, economic, social, cultural, and technological developments are occurring at an increasingly rapid rate, and information grows exponentially. Thus, all these changes and developments have been constantly transforming our lives and perspectives, and the education systems of the countries.

The 21st century, which is also called the 'Information Age' or the 'Digital Age', has offered numerous technological developments for humanity. These numerous technological

developments have greatly affected the education field as it has in every field. This change, especially in the field of education, has brought along many changes from the professional competencies of teachers to teaching methods and techniques. For instance, humans have long been accustomed to using computers in all aspects of life thanks to the development of technology, and so new scientific methods for teaching have been improved thanks to these developments. Therefore, it can be said that two of the most prominent actors in all these changes have been learners and teachers (Orhan-Göksün & Kurt, 2017).

Developments in the field of education have occurred in parallel with the change in the nature of knowledge. So much so that, in the industrial society, knowledge was seen as a certain and single truth, but in the information society, the idea that knowledge could be questioned and therefore changed, rather than being a certain and single truth, arose. In this century we live, the last thing that should be given importance in the field of education is knowledge itself. Information that cannot be understood and assimilated, that cannot be chosen in accordance with the purpose and associated with life, does not provide any benefit to human beings (Harari, 2018). Thus, today's education policies emphasize guiding the students to reach the information with their own methods and use the information after discovering it, rather than giving the information to the students and making them memorize it, as in the past (Kalemkuş, 2021).

Teacher-centred educational institutions that teach students to memorize knowledge and are based on extrinsic motivation have been replaced by student-centred educational institutions based on intrinsic motivation, where students internalize the information by making sense of it and use the information in real life (Çevik & Demirtaş, 2021) because all countries in the world have adopted the primary goal of raising qualified people in the 21st century (A. Aydın, 2019). Concerning the improvement of new methods and techniques for teaching and the needs of the learners, countries' education systems have been updated to respond to these needs. Türkiye is one of the countries which has been updating its teaching programs and curricula by doing necessary changes for all levels from preschool education to higher education.

2.2. 21st Century Skills

The 21st century, also called the 'Information Age' or 'Digital Age', is a century in which many developments are experienced in different disciplines, and accordingly, changes are inevitable. This change is not only positive, forward-looking, and constructive, but also

very fast, large, complex, and uninterrupted, which has increased the unpredictability of the advances. For this reason, a person needs to develop his/her knowledge, skills, attitudes, and behaviours necessary to anticipate these changes and accept them, which makes continuous and lifelong learning necessary for the person to acquire the skills called “21st Century Skills” that s/he should have in the century s/he lives in.

Undoubtedly, one of the topics on the agenda today is to equip learners with 21st century skills that they need to live. Therefore, studies are carried out on what 21st century skills to be acquired by the learners should include (Seferoğlu, 2021). For this reason, the 21st century skills have been identified and classified differently by numerous institutions and organizations such as Partnership for 21st Century Skills (P21), EnGauge North Central Regional Educational Laboratory 21st century skills (NCREL), Assessment & Teaching of 21st Century Skills (ATCS), The American National Research Council (NRC), International Society for Technology in Education (ISTE), The Organization for Economic Cooperation and Development (OECD), The Asian Society, Tony Wagner’s Framework of 21st Century Skills, and Ministry of National Education (MONE). According to such institutions and organizations, 21st century skills are classified under cognitive, emotional, sociocultural, metacognitive, and digital skills headings. Though those skills are classified under different headings, they are interconnected with each other and develop dependently.

The rapid changes and developments in the social order of the 21st century require human beings to adapt to this developing process. One of the ways to adapt to this new century we are in and the skills it requires is to update education systems according to the needs and skills since educational institutions are one of the most effective areas of change and development (Doğu, 2022). Therefore, countries have updated their education systems and incorporated 21st century skills into them to educate individuals who are competent and qualified in a variety of fields (Ciğerci, 2020). That is, knowledge is replaced by skills and competencies, and new, creative, original, and critical thinking is of greater importance in updated educational systems.

Education systems in the 21st century aim to raise individuals who can adapt to the rapidly changing and globalizing world and have acquired the skills needed to live (Trilling & Fadel, 2009). The 21st century skills that students need in an educational context include critical thinking, problem-solving, communication and collaboration, creativity, self-efficacy, initiative and self-direction, innovation, metacognition, planning, flexibility and adaptability,

productivity, information- media and technology literacy (Ciğerci, 2020), reasoning, self-regulation (Ahonen & Kinnunen, 2014), collaborative problem solving, complex problem solving, and digital information literacy (Geisinger, 2016), Information and Communication Technology (ICT) literacy (Ainley et al., 2016), decision making, global awareness, global citizenship, leadership, responsibility, citizenship literacy, lifelong learning (Koçak & Göksu, 2020). So, 21st century skills can be defined as the combination of the knowledge, skill, and literacy necessary for being successful and competent both in the work life and daily life of individuals (Partnership for 21st Century Learning (P21), 2019). Therefore, it is crucial to prepare young individuals for the 21st century in order to make them adapt to the profession, social norms and values, and life in general in this new era (Irgatoğlu & Pakkan, 2020). That is to say, teachers and teacher trainers have the greatest responsibility to achieve all these educational purposes.

2.2.1. Classifications of 21st century skills

In the 21st century, developments in the fields of science, technology, economy, and politics have caused changes in the characteristics expected from individuals (Cansoy, 2018; Wagner, 2010). The field of education has also been affected by these changing factors (Orhan-Göksün & Kurt, 2017), so various studies have been carried out to determine the skills that learners should have to live properly in today's world. However, 21st century skills, which have an important place in today's world, have not been defined in a clear, universal way (Dede, 2010). Despite this, 21st century skills have been handled and classified in various ways by many different organizations for individuals to be successful both in their education life and daily life.

In this respect, the P21 Framework, which is taken as a basis in this research study since it is the one that is accepted commonly, and the other 21st Century Skills Frameworks accepted in the literature are examined and compared below (See Table 2.1.).

Table 2.1. Comparison of 21st Century Skills Classifications

Frameworks	Domains	Clusters of Competencies
The Partnership for 21st Century Skills (P21, 2019)	Life and Career Skills	Flexibility and adaptability, leadership and responsibility, productivity and accountability, initiative and self-direction
	Learning and Innovation Skills	Critical thinking, problem -solving, communication, collaboration, creativity, innovation
	Information, Media, and Technology Skills	Information literacy, media literacy, information and communication technology literacy

Table 2.1. Cont. Comparison of 21st Century Skills Classifications

Frameworks	Domains	Clusters of Competencies
Organisation for Economic Cooperation and Development (OECD, 2018)	Knowledge	Disciplinary knowledge, interdisciplinarity knowledge, epistemic knowledge, procedural knowledge
	Skills	Cognitive and meta-cognitive skills, practical and physical skills, social and emotional skills
	Attitudes and Values	Personal values, social values, societal values, human values
International Society For Technology In Education (ISTE, 2016)	Empowered Learner	Setting and reaching learning goals, creating unique learning environments, using technology in learning environments
	Global Collaborator	Working and collaborating with local and global teams, using digital tools to enrich their learning
	Creative Communicator	Expressing oneself creatively using different sources
	Computational Thinker	Using technology for problem solving and strategy development
	Innovative Designer	Using various technologies to identify and solve problems in a design process by creating new, useful, or creative solutions
	Knowledge Constructor	Constructing knowledge, creating creative works, critical thinking
	Digital Citizen	Living in an interconnected digital world, recognizing learning and working rights, responsibilities and opportunities, acting safely, legally and ethically
The American National Research Council (NRC, 2011)	Cognitive Competency	Technical knowledge, problem-solving, critical thinking
	Interpersonal Competency	Appreciation for diversity, social skills, teamwork and collaboration, intellectual openness, complex communication
	Intrapersonal Competency	Self-regulation, self-management, self-improvement, time management, flexibility, executive functioning
The Asian Society (2013)	Cognitive Competencies	Academic mastery, creativity, critical thinking
	Interpersonal Competencies	Global awareness, leadership, communication and collaboration
	Intrapersonal Competencies	Learning how to learn, intrinsic motivation, growth mindset
EnGauge North Central Regional Educational Laboratory (NCREL, 2002)	Digital-Age Literacy	Information literacy, scientific literacy, economic literacy, basic literacy, visual literacy, multicultural literacy, technological literacy, global awareness
	Inventive Thinking	Adaptability, managing complexity, risk taking, self-direction, creativity, curiosity, higher order thinking, sound reasoning
	Effective Communication	Teaming and collaboration, social and civic responsibility, personal responsibility, interpersonal skills, interactive communication
	High Productivity	Planning, prioritizing, managing for results, ability to produce relevant and high-quality products, effective use of real-world tools

Table 2.1. Cont. Comparison of 21st Century Skills Classifications

Frameworks	Domains	Clusters of Competencies
Assessment & Teaching of 21st Century Skills Framework (ATSC21, 2010)	Ways of Thinking	Creativity and innovation, problem solving and decision making, metacognition, learning to learn, critical thinking,
	Ways of Working	Collaboration and Communication
	Tools for Working	Information literacy, informational and communication technology literacy
	Living in the World	Life and career skills, global and local citizenship, personal and social responsibility including cultural awareness and competence
Tony Wagner's Framework (Wagner, 2010)	Critical Thinking and Problem Solving	Questioning the accuracy of information
	Collaboration Across Networks and Leading by Influence	The need for leadership and the ability to work together
	Agility and Adaptability	Using different tools for problems, working in harmony
	Initiative and Entrepreneurship	Taking risks and initiative when necessary
	Effective Oral and Written Communication	Expressing oneself correctly in oral and written communications
	Accessing and Analyzing Information	Reusing the information in a creative way thanks to imagination
	Curiosity and Imagination	Empathy, productivity and imagination
Ministry of National Education 21st Century Skills (MEB, 2017)	Communication in Mother Tongue	The ability to communicate effectively using written, verbal and non-verbal communication tools
	Communication in Foreign Languages	The ability to recognize cultural elements and language diversity, understand oral and written messages, understand what is read, respect cultural diversity, be curious and interested in language learning
	Math Proficiency	The ability to know mathematical theories, measurements, formulas, understanding and using mathematical terms, apply basic mathematical formulas in daily life, develop a positive attitude towards mathematics
	Science and Technology Proficiency	The ability to ask questions to understand natural life, comprehend the impact of science and technology on natural life, comprehend the features of scientific inquiry, establish cause and effect relationships
	Digital Proficiency	The ability to research, question the reliability of the information presented, use the necessary tools for cultural, social and professional purposes
	Learning to Learn	The ability to know their own learning strategies and strengths/weaknesses, acquire self-discipline and independent study skills, evaluate their own learning, develop problem-solving skills, and benefit from their own previous learning and experiences
	Perception of Initiative and Entrepreneurship	The ability to recognize opportunities, work individually and as a group, take risks, assess the situation, take initiative and think innovatively, and be determined to achieve goals

Table 2.1. Cont. Comparison of 21st Century Skills Classifications

Frameworks	Domains	Clusters of Competencies
(Cont.) Ministry of National Education 21st Century Skills (MEB, 2017)	Social and Public Proficiency	The ability to know basic concepts related to society and culture, be aware of and respect cultural diversity, empathize, cooperate, avoid conflicts, follow current developments, and deal with the solution of problems that concern the society
	Cultural awareness and expression	The ability to be aware of local, national and international cultural heritage, have knowledge of cultural studies and popular culture, be aware of cultural and linguistic diversity, participate in cultural life
	Cultural, Physical and Natural World Knowledge	Science, social sciences, humanities, mathematics, history, language, and arts
American Association of Colleges & Universities (AACU, 2007)	Intellectual and Practical Skills	Inquiry and analysis, written and verbal communication, critical and creative thinking, information literacy, digital literacy, problem solving, and teamwork
	Personal and Social Responsibilities	Foundations and skills for civics, intercultural knowledge and competence, lifelong learning, ethical reasoning and behaviour
	Holistic Learning	Synthesizing and making progress

As basis for the present study, the categorisation of The Partnership for 21st Century Skills (P21) is explained in depth to have a better grasp of the context.

The Partnership for 21st Century Skills (P21)

The 21st Century Learning Framework is designed and developed by P21 in collaboration with education professionals, business representatives, and policymakers in 2002 to define the knowledge, skills, expertise, and support systems students need in order to realize the learning outcomes of the 21st century and to enable students to become successful individuals in the fields of education, work, social life, and citizenship (Partnership for 21st Century Skills (P21), 2009). With this framework, 21st century skills, learning outcomes and support systems, which are located at the centre of learning, have been determined. “Partnership for 21st Century Learning (P21)”, is an applied strategic education project in teaching 21st century skills that has been used by thousands of teachers and hundreds of schools both in the United States of America and other countries to make 21st century skills the central focus of learning (Partnership for 21st Century Skills (P21), 2009).

In the 21st Century Learning Framework, the upper part of the circular figure represents “student outcomes” (represented by the arches of the rainbow) while the lower part of the circular figure represents “support systems” (represented by the pools at the bottom), as shown in the figure (See Figure 2.1.). In the 21st century learning and teaching process, each component in the given framework of 21st century learning works interdependently (Gelen, 2017) because, in the context of the 21st century learning framework, the aim is not only to identify 21st century skills, but also to integrate the determined skills into all levels of education (Çiftçi et al., 2021).

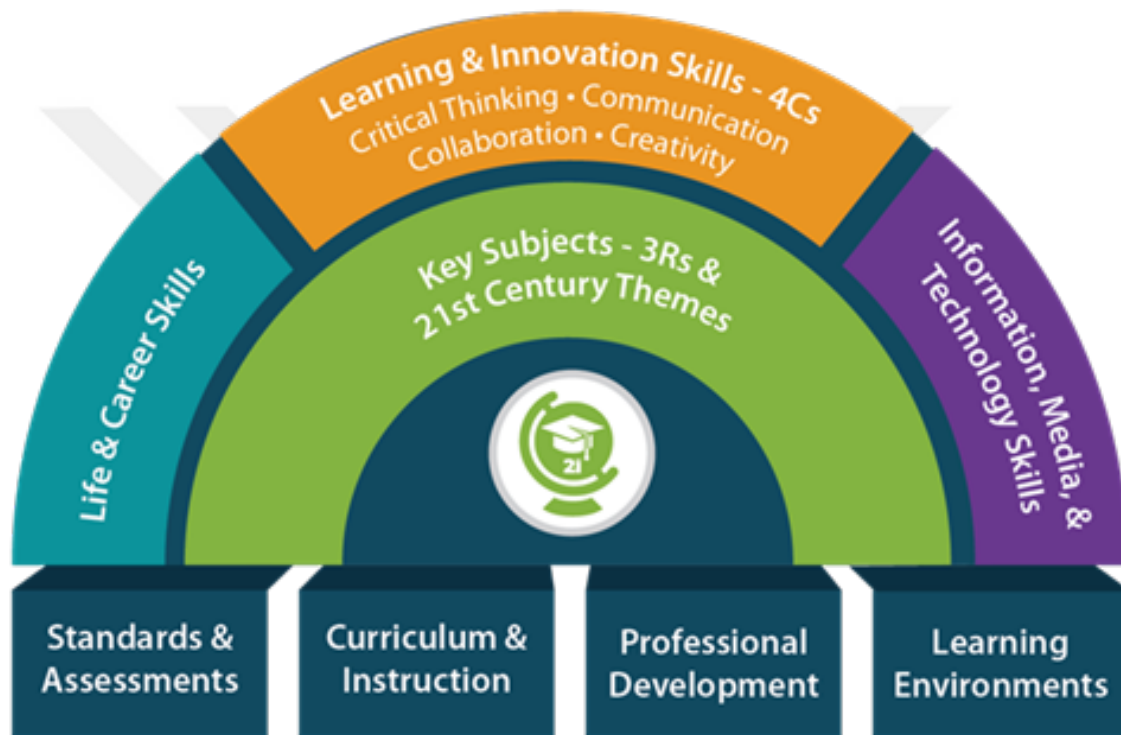


Figure 2.1. 21st Century Learning Framework (Battelle for Kids, 2019).

Below are outlined and classified the categories within the figure of 21st Century Learning Framework.

21st Century Student Outcomes

21st century student outcomes (represented by the arches of the rainbow) are the knowledge, skills, and expertise that learners need to be successful and proficient in the 21st century they live. 21st century student outcomes cover the *Key Subjects- 3Rs and 21st Century Themes*, *Life and Career Skills*, *Learning and Innovation Skills- 4Cs*, and *Information, Media, and Technology Skills* (See Figure 2.1.).

1. Mastery of key subjects- 3Rs

In the 21st century, mastery of key subjects -3Rs (core academic content mastery) and 21st century themes are essential for the learners. Key subjects include the disciplines of English, world languages, reading or language arts, science, mathematics, economics, arts, history, geography, and government and civics. In addition to these key subjects, schools should ensure that the interdisciplinary themes of the 21st century are integrated with global awareness, economic, financial, business and entrepreneurial literacy, health literacy, civic literacy, and environmental literacy, so, the curriculum goes beyond core competence.

2. Life and career skills

In the 21st century, it is necessary to develop thinking skills, content knowledge, social and emotional skills for students to be successful and competent in complex living and working environments. Thus, life and career skills include initiative and self-direction, flexibility and adaptability, productivity and accountability, social and cross-cultural skills, and leadership and responsibility.

3. Learning and innovation skills

In the 21st century, learning and innovation skills focus on the 4Cs of creativity and innovation, communication, collaboration, and critical thinking and problem-solving skills which are essential in preparing students for the future to set apart learners who are prepared for the increasingly complicated personal and professional contexts of the 21st century from those who are not.

4. Information, media, and technology skills

In the 21st century, in a world where there are many opportunities to access information, technological tools change and develop rapidly, and the ability to cooperate is important; it is necessary for individuals to create, evaluate and effectively use information, media, and technology to be effective citizens (Erten, 2019). And thus, having the skills of media literacy, information literacy, and information and communication technology literacy are necessary for individuals.

21st Century Support Systems

21st century support systems represented by the blue pools at the bottom of the 21st century skills figures are the vital systems that students need to learn and be proficient of 21st century skills. 21st century support systems cover the standards and assessments, professional

development, curriculum and instruction, and learning environments of 21st century skills. All components must be in harmony to create a support system that gives today's learners the outcomes that they need for the 21st century they live in.

1. Standards and assessments

Standards and assessments are prepared by P21 to present a valid strategy to apply to the next generation born into the 21st century. According to P21 (2009), the 21st century standards include focusing on skills of the 21st century, knowledge of content, and expertise, building an understanding across and among the core subjects in addition to the 21st century interdisciplinary themes, emphasizing deep understanding rather than superficial knowledge, engaging learners with the real-world data, tools, resources, and experts they will meet in college, in work and life, allowing for multiple levels of mastery. Besides, the 21st century assessments include supporting a balance of assessments, together with high-quality standardized testing and efficient formative and summative assessments in the classroom, emphasizing useful feedback on learners' performance that is integrated into their everyday learning, requiring a balance of technology-enhanced, formative and summative assessments which measure learners' proficiency of 21st century skills, enabling the development of student portfolios which demonstrate their proficiency of 21st century skills to their teachers and candidate employers, and enabling a balanced portfolio of measures to assess and evaluate the educational system's efficiency at reaching high levels of student proficiency in 21st century skills.

2. Curriculum and instruction

One of the most important outcomes of the teaching and learning process is the learner's mastery of 21st century skills. Therefore, it is essential to create and implement curriculum and instructional strategies (teaching methods) that help to improve 21st century skills of learners. According to P21 (2009), 21st century curriculum and instruction include teaching 21st century skills separately within the context of key subjects and interdisciplinary themes of the 21st century, providing chances for learners to apply 21st century skills across content areas and promote a competency-based approach to learning, enabling innovative learning methods that combine the use of supportive technologies, inquiry- and problem-based methodologies, and higher order thinking skills, and encouraging the integration of resources of the community beyond school walls.

3. Professional development

In 21st century, professional development is crucial for the growth and development of contemporary teachers because there are many different viewpoints, technologies, and opportunities for learners and educators in the world of education today. So, according to P21 (2009), 21st century professional development includes highlighting the ways how instructors can take advantage of chances to integrate 21st century skills, tools, resources, and teaching strategies into their classroom practices and assist them in determining what activities they can replace or/and de-emphasize, balancing direct instruction with project-based teaching methods and techniques, illustrating how a deeper comprehension of subject matter can improve problem-solving, critical thinking, and other 21st century skills, enabling 21st century professional learning communities for educators that model the types of classroom instruction which best foster learners 21st century skills, cultivating skills of educators to recognize particular learning styles, intelligence, strengths and weaknesses of the learners, helping educators to improve their skills to utilize different kinds of strategies to reach diverse learners and establish environments that support varied teaching and learning, supporting the ongoing evaluation of 21st century skills development of learners, encouraging knowledge exchange among communities of practitioners, using face-to-face, virtual and blended (hybrid) communications, and using a scalable and long-lasting (sustainable) model of professional development.

4. Learning environments

In 21st century, classrooms considered as the 21st century learning environments are all well-equipped with computer hardware, software, electronic whiteboards, and a wealth of digital and online learning tools and resources. That is, interactive learning, higher-order thinking skills, and learner engagement (cooperation and collaboration) are prevalent and can be quickly seen when one enters a 21st Century learning environment. Thus, according to P21 (2009), 21st century learning environments include creating physical environments, learning practices and procedures, and human support which promote the outcomes of teaching and learning of 21st century skills, supporting professional learning communities that allow teachers to collaborate, cooperate, interact, share best practices and incorporate 21st century skills into classroom practices, enabling learners to learn in relevant, real-world 21st century contexts like project-based works, permitting equal access to high-quality learning resources, tools and technologies, providing modern interior and architectural designs for individual,

team and group learning, and supporting local and global participation in online and face-to-face learning.

2.2.2. Sub-dimensions of 21st century skills

In general, 21st century skills are planned for various main fields, and these main fields are divided into sub-dimensions based on the main fields so that they can be considered in a more detailed way. Accordingly, in the ‘The Definition and Selection of Key Competencies’ report prepared by the OECD in 2005, parallel to other research, it is seen that the field of education is divided into sub-dimensions as cognitive skills, affective skills, and sociocultural skills (Çiftçi et al., 2021; OECD, 2005). In addition to these sub-dimensions, metacognitive and digital skills might well be counted as sub-dimensions of the field of education which is one of the main fields of 21st century skills. Sub-dimensions can also be divided into sub-skills within themselves, and based on this information, the following table (See Table 2.2) can be created based on the study conducted by Çiftçi et al. (2021).

Table 2.2. Sub-dimensions of 21st Century Skills

Sub-dimensions	Sub-skills	Definitions of sub-skills
Cognitive Skills	Knowledge Management Skill	Use of tools, use of resources, questioning skills
	Knowledge Constructing Skill	Critical thinking, reasoning, information processing skills
	Knowledge Use Skill	Analytical skills, judgment and evaluation, solution generation skills
	Problem Solving Skill	Metacognition, creative thinking skills
Affective Skills	Self-Identity	Self-perception, self-esteem, self-respect
	Self-Worth	Awareness, reliability, honesty
	Self-Management	Goal setting, self-efficacy, responsibility
	Self-Responsibility	Responsibility, desire for success, assertiveness
Sociocultural Skills	Social Membership	Social value system, sense of community, global citizenship
	Social Sensitivity	Respect for differences, intercultural understanding
	Socialization Skill	Communication skills, intercultural communication skills, fluency
Metacognitive Skills	Social Task	Group work and task completion, leadership
	Planning	Goal setting, task-orientation, organization
	Monitoring	Comprehension, concentration
	Evaluation	Self-evaluation, self-correction
Digital Skills	Digital Literacy	Digital content creation, transacting and innovation
	Information-data and Media Literacy	Digital communication and collaboration

Cognitive skills

Cognitive development is the improvement of mental processes that help a person comprehend and learn about the environment around him or her (Senemoğlu, 2018). So, it can be said that cognitive skills are the wheels of the system that allow the brain to process the

information coming through the senses of the person and give all simple or complex responses. The main ones of these wheels in the prefrontal cortex of the brain are attention, memory, logic and reasoning, and processing, and each of them is crucial to the processing of fresh information. Thus, the ability of the brain to think, read, learn, reason, pay attention, and recall are all skills that should be developed in the early years of life since these abilities help to sort incoming information and distribute it to the appropriate areas of the brain.

Cognitive skills, as one of the sub-dimensions of 21st century skills, also cover many other sub-skills such as *problem-solving, decision-making, creativity, logic and reasoning, critical thinking, and self-direction*. Moreover, *the use of tools, use of resources, and questioning skills* may be regarded as sub-skills of *knowledge management skills*; *critical thinking, reasoning, and information processing skills* may be regarded as sub-skills of *knowledge constructing skills*; *analytical skills, judgment and evaluation, and solution generation skills* may be regarded as sub-skills of *knowledge use skills*; *metacognition and creative thinking skills* may be regarded as sub-skills of *problem-solving skills*, specifically. Especially, *developing knowledge management, knowledge constructing, knowledge use, and problem-solving skills* in the cognitive skills dimension has become indispensable for students of our age (Çiftçi et al., 2021).

Affective skills

Affective skills refer to the skills and behaviours which involve emotions, and in which emotions come to the fore. In other words, the emotions, moral values, wishes and desires, motives, and tendencies that are desired to be gained by the individual are within the scope of the affective field. Therefore, affective skills have a very important place in education.

The person is also under the influence of strong emotions and various other emotional factors while thinking and reasoning direct him/her (Çeçen, 2002). Emotion is the effect, reaction, and impression that a situation, object, or person creates in the inner world of the person. Thus, emotional development is seen as a learning process in which the individual perceives and makes sense of what is going on around him. In this perception process, the person reacts, and the active use of the senses contributes to the mental development of the person.

Social development, on the other hand, is seen as the process of learning behaviours appropriate to the values of the society in which the individual lives. The individual acquires these skills by establishing relationships with the people around him/her and thus becomes a social being (Tarhan, 2023). Acting in accordance with the expectations of society contributes to the social development of the individual. An individual who develops social skills expresses him/herself well, establishes positive relationships and effective communication with the people around him, and solves the problems s/he encounters in a way that is appropriate for society.

Social development is a moral development process that examines what is right and wrong. According to Kohlberg (1984), moral development is completed in three main stages: the period corresponding to the age of 5 and before is the '*Pre-conventional Moral Development*', the period corresponding to the age of 6-11 is the '*Conventional Moral Development*', the child begins to develop an understanding of morality depending on external rules, and the period corresponding to the age of 12 and later it is the '*Post-conventional Moral Development*' in which the child begins to question social rules and moral values, and understand the rules can be changed. Therefore, it is possible to say that the period comprising the primary school years may be counted as critical because children develop their own attitudes and beliefs during these years. And it is very difficult to change the attitudes and values after that time.

In addition to these, social-emotional development is known as the social, emotional, and academic learning and development process of the individual throughout his/her life. There are some factors that cause the use of affective skills in new programs and the training given to focus on teaching affective skills. The fact that everyone has different needs and abilities, therefore the understanding of useful knowledge can vary from person to person, students have the freedom to express their feelings comfortably, and the urge to be respectful to themselves and the people around them can be shown among these factors. According to the constructivist approach, education should be individualized, and the person should learn only the information that is useful to him/her. Schools are responsible for teaching how to learn useful information in the easiest and fastest way. That is, in the 21st century information age, the school should teach the individual how to be in search of knowledge, not only get it. For this reason, the constructivist approach has been adopted in the program that has been put into practice in schools since the 2005-2006 academic year. There are four main sorts of

affective skills in the learning process as *self-identity, self-worth, self-management, and self-responsibility*. And, these main skills cover some sub-skills such as *self-perception, self-esteem, self-respect, awareness, reliability, honesty, goal setting, self-efficacy, responsibility, desire for success, and assertiveness*.

Sociocultural skills

The abilities one uses every day to engage and communicate with others are known as social skills. Social skills are learned skills that allow individuals to express themselves correctly, communicate with their environment, and solve their own problems (Ayyıldız, 2019). They comprise both verbal and non-verbal cues like gestures, body language, facial expressions, and speech. All these skills, which other living things do not have, reveal the ability of humans to create different cultures over time. Culture enables people to learn the language, religion, human relations, physical and social environment, societal values, and behaviour patterns throughout their lives. The term ‘sociocultural context’ covers the immediate physical and social environment in which individuals live or in which anything takes place, and it addresses the environment in which the person resides as well as the people and institutions they interact with. Therefore, gaining social and sociocultural skills is important since they enable individuals to express themselves correctly, communicate with their environment, solve problems, make friends, and get through life with a higher level of satisfaction. It can be said that humans have high social skills if they know how to act and behave in social circumstances, and comprehend both implicit and explicit social rules.

Social and sociocultural skills cover many other sub-skills such as *communication, collaboration, global awareness, global citizenship, teamwork, leadership, flexibility and adaptability, and social engagement*. Today, with the advancement of technology, different ways of communication have emerged, and this is called communication technologies. With these communication technologies, individuals can now exchange information independent of time and place, and thus gain new skills. Therefore, in order to increase the level of success in societies based on information and communication technologies, it is becoming more and more important for individuals living in that society to have social communication skills and the skill to respect differences (Glimps & Ford, 2008), intercultural understanding, intercultural communication, global citizenship, sense of community, and social value system.

Metacognitive skills

Understanding one's own thought patterns is the process of metacognition. It can be expressed in a variety of ways, such as understanding one's own mental processes and knowing when and how to use particular problem-solving approaches (Metcalfe & Shimamura, 1994). That is, one can arrange and assess his/her thought processes for learning and solving problems by using metacognitive skills. The phrase 'metacognition' refers to cognition about cognition, or more colloquially, thinking about thinking. Since the 21st century requires individuals to be aware of their own learning processes and how they learn best, think critically, learn information quickly, and advance their improvement both professionally and educationally, metacognitive skills have great importance in one's life who is living in this century.

There are three main sorts of metacognitive skills in the learning process as *planning*, *monitoring*, and *evaluation*. These main skills also cover some sub-skills such as *goal setting*, *task orientation*, *self-evaluation*, *self-correction*, *planning*, *organizing*, *comprehension*, and *concentration*. Metacognitive skills often begin to emerge in early childhood, and they continue to develop and change through adolescence and into adulthood, as humans go from academic to professional contexts. Therefore, knowing and having these skills is crucial, especially in the 21st century, also known as 'the information age' since they aid people in understanding how they learn best and how their own learning processes work.

Digital skills

Digital skills are a variety of skills that allow humans to gather and manage information via networks, communication apps, and digital tools. To engage in creative and efficient self-fulfillment in life, education, the workplace, and social interactions in general, they enable individuals to develop and exchange digital information, communicate, cooperate and collaborate, solve problems (UNESCO, 2018), find, create, share, and evaluate digital contents, and take feedbacks to make necessary changes by using digital devices like computers in a work-anywhere world.

In today's world, 21st century, every industry one can think of is being affected by the rising trend of digital transformation. That is the reason why the value given to digital skills is gaining more and more importance day by day. Digital skills cover many subskills such as *information-data and media literacy*, *digital communication and collaboration*, *problem-solving*, *digital literacy*, *digital content creation*, *transacting*, and *innovation*. That is, by

mastering these important digital skills, students both increase their employability and future-proof their careers.

2.3. The Significance of 21st Century Skills in ELT

Language is the most important factor in human growth and development and the first means of communication (Valipour & Aidinlou, 2014) since it is a natural tool that provides an understanding between people and helps to share feelings and thoughts. In today's world, using a national language is not enough when the needs and expectations of the 21st century are considered. Internationalization and globalization have made it necessary for people to communicate and interact with different cultures. Therefore, to be able to communicate and collaborate efficiently with different people of various cultures, using an international language is crucial.

English language has significant role in today's world both for the countries which use English language as their mother tongue and for all other countries around the world. English language has been used in different branches of science, so, it has become Lingua Franca. Therefore, to take their part in today's world, learning English as a foreign language in non-English speaking countries is of great importance for individuals. For this reason, most education systems aim for learners to study English as a foreign language.

Education systems, programs, and curricula have been updated according to the needs and expectations that the age brings to respond better to the changing world. In the century we live, countries updated their education systems as they cover the skills that the century needs. These skills require solving complex problems, thinking critically about tasks, effectively interacting with people from different cultural backgrounds, working collaboratively with others, and adapting to changing environments and conditions (S. Aydın, 2021).

To assist practitioners in integrating these abilities with the teaching of fundamental academic disciplines, P21 has created a unifying vision called the 21st Century Learning Framework, and so '21st Century Learning'. This Framework outlines the skills and information that learners need to improve in order to become successful in their classes and life (Partnership for 21st Century Learning (P21), 2019).

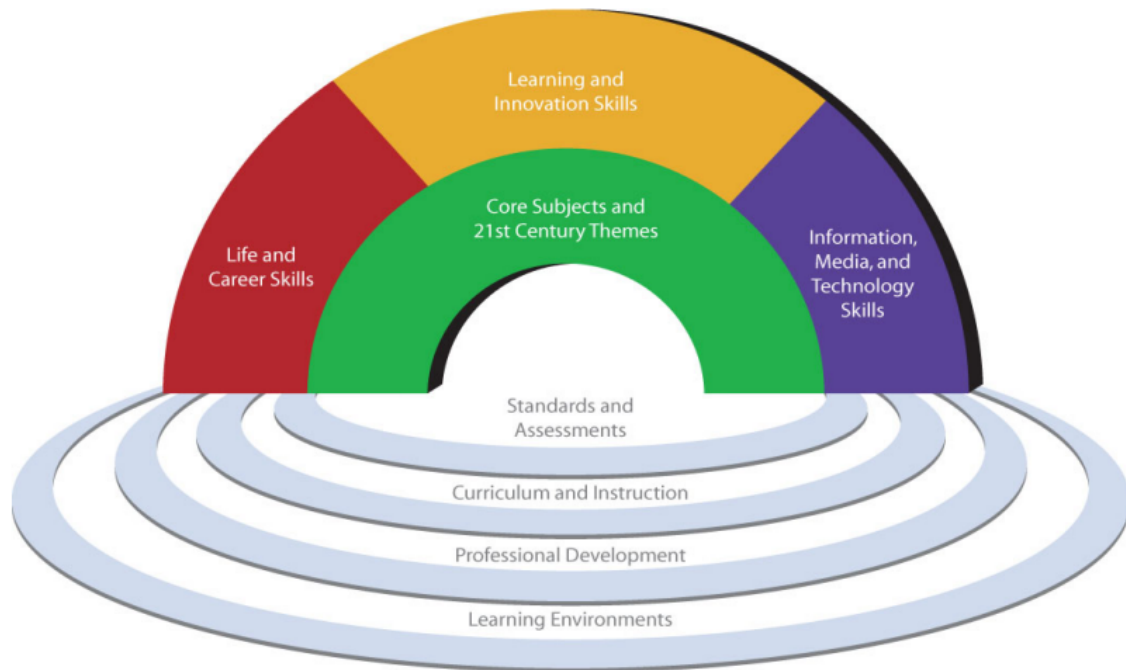


Figure 2.2. Framework for 21st Century Learning (Partnership for 21st Century Learning, 2019).

A detailed version was discussed within the earlier parts of the study (See Figure 2.1.). Here in Figure 2.2., a limited version is shown and explained emphasizing the significance of having 21st century skills specifically in the ELT department.

In the Framework for 21st Century Learning (See Figure 2.2.), there are basic subjects and main themes for learners in the centre. English, reading, language-related subjects, languages used worldwide, science, mathematics, geography, history, arts, economics, government, and citizenship are all considered core subjects. As it can be understood from the core subjects, 21st Century Learning requires humankind to know at least a foreign language to be able to communicate and collaborate with people from all around the world and get in touch with different cultures with a click thanks to the developing technology in order to succeed in this century.

Recent studies have emphasized how crucial it is for English speakers to become highly qualified critical thinkers, language users, and effective social change agents (Sun, 2014). Therefore, instead of just imitating native English speakers and emphasizing language acquisition, ELT seeks to improve learners with a feeling of social responsibility now (Erdoğan, 2019). In a similar vein, research conducted by Eaton (2010) suggested that the emphasis in today's English as a Foreign Language (EFL) classroom should be on how to use language and culture to communicate with people throughout the world, rather than grammar

and memorization exercises. That is, it showed that a technology-based, student-centred, learning-by-experiment-based environment that supports positive competition should be created. Teachers must use new and innovative frameworks and techniques to accomplish these new goals and objectives in their classes as a component of the reconceptualization of the EFL classroom. So, it can be said that language teachers have a great responsibility to prepare their learners for the 21st century, to relate what they learn from real life, and to provide them with the skills they need.

2.4. Awareness

Awareness is a relative concept. Therefore, it has more than one meaning, and it can be defined in various ways. In general, the word 'awareness' refers to knowledge, consciousness, cognition, and alertness. The state or capacity to observe, perceive, feel, or be cognizant of events, objects, or sensory patterns is also known as awareness (Gafoor, 2012). In lexical meaning, awareness is defined as perception and comprehension of a situation, concern about a specific situation, being aware, and having knowledge about something (Oxford Advanced Learner's Dictionaries). While awareness can be a sense belonging to the internal organs, it can also express an external situation received through the sense organs. Thus, it can also be defined as the ability to perceive, sense, and know the events developing around a living thing. On the other hand, it is possible to define awareness briefly as 'being conscious of something'.

2.4.1. Awareness in the Field of Education

Awareness refers to being aware, conscious, and cognizant. At this level of consciousness, an observer can confirm sensory data without necessarily indicating comprehension. That is, the possessor of any knowledge must include awareness, yet awareness alone does not include any knowledge type (Gafoor, 2012).

Awareness has various meanings in different fields. So, it can be expressed in different ways. As Gafoor (2012) states, the most common definition of awareness in the field of psychology is awareness as consciousness like awareness of the body or emotional awareness. It is a form of self-awareness, and awareness here refers to 'unique perception' which is entirely subjective and does not necessitate extensive knowledge. On the other hand, the most common definition of awareness in the field of education is 'acquired knowledge without given explicit instruction' such as public awareness of illnesses like tuberculosis or cancer, which means common understanding on a social, scientific, or political matter may be

referred to awareness. To say a person ‘has higher awareness’ may imply that the person is more knowledgeable about certain topics than others.

Awareness may also be defined as the ability to deal with. To determine a person’s competence in handling particular situations and tasks, some awareness tests can be administered as measurement tools in the field of education. Awareness measurements can be made in three different ways as scales, tests, or surveys, depending on the nature of the subject being measured. Thus, it is understood that awareness is a skill that can be measured in different ways considering the nature of the subject being measured; and enhanced or learned considering the results of those kind of measurement tools.

2.4.2. 21st Century Skills Awareness

The person who has the knowledge of the fact that they live in an increasingly globalized world also has the knowledge of the essential skills, called 21st century skills, they need to survive in this increasingly globalized world. The concept of ‘21st Century Skills Awareness’ refers to one’s own knowledge, consciousness, or cognition towards the skills required in the 21st century to live properly. Being aware of or having knowledge on 21st century skills is crucial in today’s world to keep up with the requirements of the age, take actions, and make necessary adjustments in each field.

The awareness levels towards 21st century skills can be measured by using various measurement tools such as questionnaires, scales, or tests. Therefore, based on the reliability of the results of the measurement tools which is used, the awareness level of the person to whom the measurement tool is applied towards 21st century skills can be revealed. Although some measurement tools give a specific score range, for measurement tools that do not give a specific score range, the average of the scores of the sample to whom the measurement tool is applied can be used to make individual assessments.

The people whose awareness levels are high towards 21st century skills know they can improve their 21st century skills they need for the world they live in since the world gets increasingly globalized, creates a love of learning since they know learning is a life-long process which never ends, and learns how to learn since learning involves more than just gaining knowledge in the globalized world (Llego, 2022). As can be seen, education and learning are fundamental here. Therefore, the concept of ‘21st century learning’ has emerged.

It is impossible to underestimate the significance of 21st century learning because it is related to the daily lives of each learner and the world that they are in.

2.5. Previous Studies

Previous studies conducted on 21st century skills are mentioned under different subheadings, and in a sequence considering their publishing dates.

2.5.1. Research conducted in Turkiye

Evin-Gencil (2013), in her study titled “Prospective Teachers’ Perceptions towards Lifelong Learning Competencies”, aimed to examine how teacher candidates perceived their capacity for lifetime learning. To conduct this study, 551 4th grade teacher candidates studying in Canakkale Onsekiz Mart University, Faculty of Education took part in this study. And, ‘The Scale of Key Competences for Lifelong Learning’ was used as the data collection tool. The results of the study showed a statistically significant difference in the perceptions of teacher candidates regarding lifelong learning competencies in terms of gender and department studied. Accordingly, female teacher candidates’ perceptions of lifelong learning competencies were found more positive than male teacher candidates’ perceptions. And, the perceptions of lifelong learning competencies of the students studying in the departments of Computer and Instructional Technologies Teaching, German Language Teaching, English Language Teaching, and Turkish Language Teaching were found significantly higher than the students studying in the other departments. In addition, it was revealed that while the area in which the teacher candidates felt most competent was communication in the native language, the areas where they felt the most inadequate were communication in a foreign language and social and civic competencies.

Karakaş (2015), in her study titled “Investigation of the Eighth-Grade Secondary School Students’ Levels of 21st Century Skills in Science Education”, aimed to determine the level of secondary school eighth-grade students’ 21st century skills for Science course and to measure it from affective, sociocultural, and cognitive dimensions. To conduct this study, 1067 middle school eighth-grade students studying in Eskişehir were chosen as participants, and as measurement tools, first the ‘21st Century Skills Scale’, and then semi-structured interview questions were used to verify the results. As a result of the research, it was stated that the participant students had a high level of affective, sociocultural, and cognitive dimensions of 21st century skills. Moreover, it was found that there was a significant

difference between the 21st century skill levels of the participants and gender, and this difference was in favour of female students.

Bozkurt and Çakır (2016), in their study titled “21st Century Learner Skills: An Investigation of Middle School Students Based on Grade Level and Gender”, aimed to investigate the level of using the 21st century learning skills that secondary school students have in school activities. The sample of the research consists of 612 secondary school students studying in different schools in Ankara in the 2012-2013 academic year. Measurement tools developed by the researcher were used to collect the data of this study. The findings showed that the participant students’ 21st century learning skills levels are high. In addition, it was revealed that female students got higher scores than male students both in general and in all sub-dimensions of the 21st century learning skills scale, therefore, it can be said that female students used 21st century learning skills more effectively than male students.

Anagün (2018), in her study titled “Teachers’ Perceptions about the Relationship between 21st Century Skills and Managing Constructivist Learning Environments”, aimed to use structural equation modelling to investigate the relationships between primary school teachers’ assessments of their proficiency in 21st century skills and their perceptions of managing constructivist learning environments. To conduct this study, 233 primary school teachers working in Eskişehir were chosen as participants, and two different scales were used as data collection tools. Data gathered from the scales found out that there is a correlation between teachers’ perceptions of the constructivist learning environment and 21st century competencies. That is, when teachers have positive attitudes toward 21st century skills such as problem-solving, critical thinking, cooperation, communication, and creativity, it can be said that they may seem to present and create learning environments that are more supportive for their students’ inquiry and research.

Tican and Deniz (2018), in their study titled “Pre-service Teachers’ Opinions about the Use of 21st Century Learner and 21st Century Teacher Skills”, aimed to find out how pre-service teachers feel about teaching and learning strategies appropriate for the 21st century. The sample group of this study consisted of 391 teacher candidates from different departments studying at an Education Faculty of a state university in Türkiye. Two different scales were used as data collection tools. According to the data gathered through these scales, results indicated that teacher candidates’ perceptions towards 21st century learner and teacher

skills varied greatly depending on the department, academic success, experience with private tutoring, teaching practicum, and gender.

Cansoy (2018), in his study titled “21st Century Skills According to International Frameworks and Building them within the Education System”, aimed to find out the 21st century skills that people should acquire, which have been conceptualized by many institutions, and how 21st century skills can be gained to learners in the education system. In this context, different reports examined basic skills as cooperation, communication, critical thinking, problem solving, innovation, leadership, intercultural and global awareness, and literacy skills as Information and Communication Technologies (ICT) literacy, Information literacy, essential content knowledge, science and health literacy, environmental and financial literacy. This study made recommendations for improving the aforementioned skills within the educational system, including altering teacher qualifications, raising awareness, changing mindsets, and modifying curricula.

Kan and Murat (2018), in their study titled “Investigation of Prospective Science Teachers’ 21st Century Skill Competence Perceptions and Attitudes Toward STEM”, aimed to investigate science teacher candidates’ opinions of 21st century skills competencies and their attitudes toward STEM, as well as the connections between these. Senior-year students from the Science Education Departments of five different universities in Turkiye who are enrolled for the 2016–2017 academic year were the participants of this study. Two different scales were used to collect the data of this study. The results of the study showed that prospective teachers had a level of agreement with the sub-dimensions of 21st century skills *‘Learning and Innovation Skills’*, *‘Life and Career Skills’*, and *‘Information, Media, and Technology Skills’* that is higher than moderate. Moreover, significant results were found in favour of female science teacher candidates in the sub-dimensions of *‘Life and Career Skills’*, and *‘Information, Media, and Technology Skills’* in terms of gender variable.

Zeybek (2019), in her study titled “Determination of Level of 21st Century Learner Skills Use of High School Students”, aimed to determine both the level of use of 21st century learning skills of high school students and whether these levels differ according to various variables. The sample of the study consisted of 412 high school 9th, 10th, 11th, and 12th-grade students studying in different high schools Karaman. A scale was used as a data collection tool. Findings of this study revealed that the students used 21st century learner skills above the moderate level and that their use of these skills differed significantly

according to their grade levels and educational goals. That is, 21st century skills usage level scores of 11th and 12th-grade students were higher than 9th and 10th-grade students.

Erten (2019), in her study titled “Preservice Teachers’ Perceptions of 21st Century Skills Competence and Their Views on Gaining These Skills”, aimed to investigate the competence perception levels of teacher candidates for the 21st century skills and the ways to improve 21st century skills of them. Besides, how gender, education department, and ICT proficiency levels affect teacher candidates’ perceptions toward 21st century skills were examined. The sample of the study consisted of 243 students from different departments who received pedagogical formation education at a state university. This study’s findings showed that teacher candidates who received pedagogical formation education had enough 21st century skills, and no significant difference was found between their 21st century skills in terms of gender or education department. Besides, no significant difference was found between teacher candidates’ ICT proficiency levels and the ‘*Life and Career Skills*’ sub-dimension of 21st century skills. However, significant differences were found between teacher candidates’ ICT proficiency levels, ‘*Learning and Innovation Skills*’ and ‘*Information, Media, and Technology Skills*’ sub-dimensions of 21st century skills. Therefore, it has been argued that proficiency in ICT contributes to the adequate level of 21st century skills.

Bedir (2019), in his study titled “Pre-service ELT Teachers’ Beliefs and Perceptions on 21st Century Learning and Innovation Skills (4Cs)”, aimed to examine the beliefs and perceptions of teacher candidates studying in the ELT department about 21st century learning and innovation skills, specifically regarding the 4Cs including the critical, creative thinking, collaboration, and communication abilities. The sample group of the study consisted of 124 English teacher candidates between the ages of 22-24 studying at the education faculty of a state university in Turkiye. The data gained from the study were collected through using a special questionnaire that included semi-structured interviews as well as closed and open-ended questions. A customized questionnaire containing both closed- and open-ended questions as well as semi-structured interviews were used to collect the data. The results showed that although English teacher candidates’ perceptions of 21st century learning were found to be highly positive, their 4Cs awareness levels were found to be moderate. In addition, interviews revealed that while English teacher candidates believed that the 4Cs had positive effects on their professional development, they had negative beliefs about

emphasizing the 4Cs in the national curriculum and assessment. That is, they claimed that the courses in the curriculum lacked the necessary context for them to use educational technologies effectively in teaching and learning.

Cemaloğlu et al. (2019), in their study titled “21st Century Skills Self-Efficacy Perceptions of Vocational High School Teachers”, aimed to determine the self-efficacy perceptions of vocational high school teachers working in Ankara after the training they received about 21st century skills, and to examine them in terms of various variables. With this purpose, 38 teachers working in different vocational high school branches in Ankara participated in the research in the fall semester of the 2018-2019 academic year. A scale was used to reveal the 21st century skills self-efficacy perceptions of the participant teachers as a data collection tool. According to the data obtained from the scale, it was found that teachers consider themselves at the ‘high level’ when their levels of self-efficacy perception of 21st century skills are examined. However, their perceptions of 21st century skills proficiency did not differ according to their educational status, gender, and professional seniority. What is more, it was found that younger teachers were at a higher level in the sub-dimension of ‘*Learning and Renewal Skills*’ when compared to older teachers.

Gürültü et al. (2019), in their study titled “Competence for 21st Century Skills Use of Secondary School Teachers”, aimed to investigate whether the competencies of using 21st century skills of secondary school teachers working in different provinces of Türkiye and in different branches differ according to various demographic variables. 506 secondary school teachers working in different provinces of Türkiye and different schools in the 2017-2018 academic year were the participants of this study. As data collection tools, a scale and a diagnostic information form were used. And the relationship between secondary school teachers’ competencies in using 21st century teaching skills and variables such as gender, years of experience, graduated faculty, and institution were examined. As a result, it was revealed that teachers working in secondary schools think that their 21st century teaching skills were at a high level, and there was no difference in terms of gender and years of experience variables in their use of 21st century teacher skills. Moreover, it was found out that the use of 21st century teaching skills by the teachers working in secondary schools differed in the “*Techno-pedagogical Skills*” and “*Flexible Teaching Skills*” sub-dimensions in terms of the faculty they graduated from but did not differ in the other sub-dimensions, and teachers working in Anatolian Imam Hatip High Schools were found to have higher scores in

the *Administrative, Techno-pedagogical, Flexible Teaching, and Productive Skills* sub-dimensions.

Önür and Kozikoğlu (2019), in their study titled “Secondary School Students’ 21st Century Learning Skills”, aimed to analyse 21st century learning skills levels of secondary school students in light of various variables. With this purpose, 920 secondary school students studying in 6th, 7th and 8th-grades in Van, Türkiye participated in the research 2017-2018 academic year. A scale was used to determine secondary school students’ use of 21st century learning skills as a data collection tool. As a result, it was concluded that students’ perception on 21st century learning skills and learning to learn, problem solving, cooperation and communication skills at a high level while their active learning skills at a moderate level. In addition to these, regarding the gender variable, it was concluded that female students perceived 21st century learning skills at a higher level compared to male students, and regarding the grade level variable, it was concluded that 7th-grade students perceived 21st century learning skills at a higher level compared to 6th and 8th-grade students.

Irgatoğlu and Pakkan (2020), in their study titled “The Awareness of English Language and Literature (ELL) Students about Their 21st Century Skills”, aimed to investigate the 21st century skill levels of undergraduate students studying at the English Language and Literature department. This research was conducted in two separate state universities, and the sample group of the research consisted of 158 ELL students together with 20 lecturers in total. Two data collection tools, one for each group, were used to investigate the levels of 21st century skills of students studying and lecturers working in the ELL department. The results presented that the students studying in the ELL department are conscious about their 21st century skills. In addition to this, the majority of the student participants claimed that they use the 21st century skills in their lives but lecturers did not agree with them, and claimed that students do not analyse new ideas, do not work patiently to find solutions to problems they face, do not have effective communication skills, do not use different thinking techniques to be creative and to create different and useful ideas, and do not try to improve themselves on 21st century skills.

Ciğerci (2020), in his study titled “Primary School Teacher Candidates and 21st Century Skills”, aimed to investigate how digital storytelling affects the 21st century competencies of prospective primary school teachers because digital storytelling itself involves a variety of skills, including those related to information, media, and technology,

communication, and collaboration. 42 teacher candidates studying at a state university in Türkiye participated in this study, which lasted 12 weeks including 4 stages in total. Within the framework of a Turkish language teaching course, participants were tasked with producing three digital stories, and the data was collected through the 21st Century Skills and Competences Scale, digital storytelling rubric, and structured interviews in this study. The results of the research showed that pre-service teachers' post-test scores taken from the scale were higher than their pre-test scores. Therefore, it was revealed by the results that digital storytelling helped individuals to improve their 21st century skills.

Şahin and Han (2020), in their study titled “EFL Teachers’ Attitude Towards 21st Century Skills: A Mixed-Methods Study”, aimed to investigate the attitudes of English teachers toward 21st century skills. 56 English teachers from different types of schools took part in the study, and both quantitative and qualitative methods were used to collect the data. For quantitative data, a questionnaire was used to determine the differences regarding teaching experience and working environment of English teachers together with the technological tools they use in their classrooms, while for qualitative data, a semi-structured interview technique was used with 8 of the participants to verify the results obtained through the quantitative one. Quantitative results showed that English teachers have positive attitudes both on 21st century skills and using technological tools in their teaching, and qualitative results showed that the majority of the English teachers use 21st century skills and technological tools to interact with students, foster teamwork, pique their interest in the material being taught, and teach and reinforce the subject taught.

Gökbulut (2020), in his study titled “The Relationship Between Teacher Candidates’ Beliefs in Education and 21st Century Skills”, aimed to investigate how educational ideas and 21st century skills were related among teacher candidates. This study was conducted with 233 teacher candidates, and data were collected by using two different scales assessing teacher candidates’ 21st century skills competence perceptions and educational beliefs. The results of this study showed that the teacher candidates' 21st century skills and the sub-factors of information, media and technology skills, and life and career skills were shown to have a high degree of positive correlation whereas learning and renewal skills had a medium level of positive correlation. Moreover, no significant difference was found between the 21st century skill levels of teacher candidates and their gender, however, when it comes to gender and

educational beliefs, it was discovered that female teacher candidates scored significantly higher than male candidates in terms of progressivism.

Nacaroğlu (2020), in his study titled “Examination of 21st Century Skills of Gifted and Average Students”, aimed to investigate how gifted and normal children perform in terms of several 21st century competencies. With this purpose, the study was conducted with 201 gifted students studying at a Science and Art Centre in the Eastern Anatolia Region of Türkiye and 300 normally developing students. Only one questionnaire was used as a data collection tool, and the results of the questionnaire revealed that the 21st century skills of gifted students were higher than those of normally developing students, and a statistically significant difference in favour of gifted students was obtained between the average scores obtained by the gifted and normally developing students from the Information and Technology Literacy, Critical Thinking and Problem Solving, Innovation and Entrepreneurship, and Social Responsibility and Leadership sub-dimensions. In addition, while there was no statistically significant difference between the total scores of gifted students from the scale in terms of gender, a significant difference was obtained between the total scores of normally developing students from the scale.

Aydın and Tan-Şişman (2021), in their study titled “21st Century Skills in Pre-Service English Teacher Education”, aimed to examine the competence perceptions of the 4th-grade teacher candidates studying in the department of English Language Teaching about 21st century skills, the importance they attach to the acquisition of these skills, and their views on 21st century skills in the courses they took in their undergraduate education. 233 teacher candidates studying at the ELT department were the participants of this study. The 21st Century Skills Form, which was developed by the researchers based on P21 and the 21st Century Learning Framework, was used as a data collection tool. The data collected with this form were analysed using descriptive statistical methods, and as a result of the analysis, it has been revealed that the prospective English language teachers, who were the participants of the research, found themselves competent in and placed a high value on having the titles of *‘Intercultural Skills’*, *‘Learning and Innovation Skills’*, *‘Career Skills’* and *‘Life Skills’*. Moreover, it has been found out that the English language teacher candidates think that the education they receive at the university is insufficient in terms of gaining 21st century skills for undergraduate students.

Yeni and Can (2022), in their study titled “The Effect of 21st Century Skills Training on Foreign Language Teachers’ Perceptions Regarding Their Educational Technology and Materials Development Competencies”, aimed to determine if the ‘21st Century Skills Material Design Teacher Training and Professional Development Program’ improves perceptions of foreign language teachers’ competencies in educational technology and material development. 33 English teachers participated in this study with the thought that teachers should get familiar with 21st century abilities and how to apply them in the classroom by developing their own digital tools for teaching foreign languages. With this purpose, an eight-week teacher training program was organized at Istanbul University for the implementation of the study. To measure perception changes, a questionnaire was applied to the participants before and after the training of eight weeks. While collecting the data, a questionnaire was applied to the participants both before and after the training of eight weeks in order to measure the changes in perception and structured interviews were conducted with the participants in order to obtain more information. Consequently, the development of teachers’ perspectives on their educational technology and material development competencies on 21st century skills was proven to be helpful with this form of strategy training.

Dokumacı-Sütçü and Sütçü (2022), in their study titled “Examination of Preservice Teachers' Competence Perceptions of the 21st Century Skills by Classification and Regression Tree (C&RT) Analysis”, aimed to investigate competence perceptions of prospective teachers toward the 21st century skills by using a C&RT approach. With this purpose, 347 prospective teachers who were enrolled in an education faculty of a state university in Türkiye were selected to be the participants of the study. Data were collected through a scale, and the collected data revealed that the majority of the teacher candidates perceived their competence at a moderate level for the learning and renewal skill dimension while they perceived their competence at a moderate to high level for the life and career skill, information, media, and technology skill dimensions. Gender was the key factor in predicting the learning and renewal skills dimension, and it was discovered that both male and female prospective teachers were found to have moderate level of perceptions of competence in this area. In addition, the department was found to be the most significant factor predicting the dimension of career and life skills, and it was found out that many prospective teachers of mathematics perceived their level of competence in career and life skills to be moderate while many prospective teachers of science and classroom perceived their level of competence in

career and life skills to be high. Finally, the average point of academic grade was found to be the most significant factor in predicting the information, media, and technological skills dimension, and it was concluded that the majority of prospective teachers with an average score of 0-70 had low-level perceptions of their own competence in the area of media, knowledge, and technology skills, whereas the majority of prospective teachers with an average score of 71-100 had high-level perceptions of their own competence.

2.5.2. Research conducted abroad

Fandiño (2013), in his study titled “21st Century Skills and the English Foreign Language Classroom: A Call for More Awareness in Colombia”, aimed to inform Colombian English teachers about their students' learning English as well as understanding their complex perspectives, about using multimedia and technologies and combining alternatives that provide the opportunity to work creatively with other people, and motivate them in this regard.

Tuzlukova et al. (2018), in their study titled “Exploring Teachers’ Perceptions of 21st Century Skills in Teaching and Learning in English Language Classrooms in Oman's Higher Education Institutions” aimed to examine the conceptual knowledge and understanding of teachers' critical thinking skills, their perceptions and thoughts of critical thinking about English language classes, and the teaching and professional development of critical thinking conducted in universities in the Sultanate of Oman. The sample of the study consisted of 293 teachers from different universities, and data were collected through a questionnaire administered both on paper and online. The results obtained from the analysis of the collected data revealed that teachers were aware of the importance of including critical thinking skills in their lessons, but they thought that they were not supported during the implementation phase.

Sang et al. (2018) aimed to investigate Chinese Teachers’ Perceptions of 21st Century Learning Competencies (TP21CLC) in their study titled “Teachers’ Actual and Preferred Perceptions of Twenty-First Century Learning Competencies: A Chinese Perspective”. 340 Chinese high school teachers between the ages of 23-52, who voluntarily responded to the applied TP21CLC questionnaire, participated in the study, and a questionnaire containing six subheadings was used as a data collection tool. The analysis of the results obtained from the questionnaire, in which each item was evaluated in two different ways as preferred learning perceptions and actual learning perceptions, showed that there is a gap between actual

perceptions and preferred perceptions of 21st century learning. Besides, the results clearly revealed that teachers' perceptions of the effective use of ICT have a positive relationship with other variables of TP21CLC.

Fatmawati (2018), in her study titled "Students' Perception of 21st Century Skills Development through the Implementation of Project-Based Learning" aimed to understand how students perceived the development of 21st century skills using project-based learning. The sample of the study consisted of English department students of one of the private universities in East Java. In this study, in which the descriptive quantitative method was used, the data were collected by applying an online questionnaire including 30 questions to the participant students. The statistically analysed survey results revealed that the application of project-based learning generally helps students to improve their 21st century skills, and the participant students agreed that project-based learning can improve 21st century skills.

Haviz et al. (2020), in their study titled "Assessing Pre-Service Teachers' Perception on the 21st Century Skills in Indonesia", aimed to examine perceptions of Thinking, Acting and Living (TAL) among the 21st century skills of teacher candidates. 321 teacher candidates studying in the fields of mathematics, biology, physics, and chemistry participated in the study. As a data collection tool, a questionnaire consisting of the 21st century skills of thinking, acting, and living was used, and that the TAL profiles of the teacher candidates studying mathematics, biology, physics, and chemistry were found to be at an average level and to be affected by gender and department. Other findings revealed that TAL levels of teacher candidates studying biology and mathematics have relations with chemistry and physics, respectively.

Baran-Łucarz and Klimas (2020), in their study titled "Developing 21st Century Skills in a Foreign Language Classroom: EFL Student Teachers' Beliefs and Self-Awareness", aimed to explore the views, beliefs, and self-awareness of EFL teacher candidates towards improving their 21st century skills, especially the Critical thinking, Creativity, Communication, Collaboration (4Cs), in the context of Polish education. 53 English teachers studying in undergraduate and graduate programs participated in this study, and as a data collection tool, a questionnaire developed in accordance with the purpose of the study was used. When the collected data were analysed, it was seen that most of the participants did not have a clear understanding of what 21st century skills are, but nevertheless had a very positive attitude towards integrating 21st century skills into their foreign language lessons. As a result,

the analysis showed that the awareness of foreign language teachers about the use and teaching of 21st century skills in their classrooms should be increased.

Mehdaoui and Benabed (2022), in their study titled “Gauging Algerian EFL Teachers’ Awareness of the 21st Century Compulsory Skills: Case of EFL Teachers at IbnKhalidoun University of Tiaret”, aimed to determine the extent of 21st century skills awareness of EFL lecturers working in Algeria since there are limited studies on the impact of teachers’ awareness on their learners’ acquisition of 21st century skills. With this purpose, 13 English language teachers from IbnKhalidoun University of Tiaret voluntarily took part in this study, and a questionnaire was used to collect both quantitative and qualitative data. The analysis of the collected data revealed that the potential of teachers to integrate 21st century skills in the classroom was related to their knowledge of those skills. Thus, it was recommended that teachers must address certain important pedagogical concerns such as excessive classroom sizes, lack of teacher education, and lack of supplementary tools and technology equipment in order to effectively integrate the 21st century skills into their own classrooms.

CHAPTER 3

3. METHOD

In this part of the study, the research design, participants, data collection tools and techniques, data collection, and data analysis are presented.

3.1. Research Design

A mixed-method research design is employed within the present study. A mixed method is a method that uses both qualitative and quantitative methods in a single study (Creswell, 1999). First, the quantitative data is collected by using a survey, and then the qualitative data is collected by a semi-structured interview conducted by the researcher to verify the results obtained through the quantitative one.

3.2. Participants

This study is carried out with -voluntarily participated- 175 participants, including 63 3rd and 104 4th grade PTEs, a total of 167 PTEs, studying at the department of English Language Teaching at Necmettin Erbakan University in the 2022-2023 academic year, and all (8) TTEs currently teaching in the department of English Language Teaching at Necmettin Erbakan University. The university to be used in this research is determined according to being the only higher education institution in this province including an education faculty, and the easy accessibility of the researcher to the participants to conduct the study. Participation was on a voluntary basis.

The frequency and percentage values according to the demographic characteristics of the Prospective Teachers of English participated in this study are presented in Table 3.1.

Table 3.1. Frequency and Percentage Values of PTE's by Sociodemographic Characteristics

Variables	Frequency (N)	Percentage (%)
Gender	Male	53
	Female	114
	Total	167
Age	19	4
	20	28
	21	72
	22	34
	23+	29
	Total	167
Grade	3rd Grade	63
	4th Grade	104
	Total	167

Table. 3.1. Cont. Frequency and Percentage Values of PTE's by Sociodemographic Characteristics

Variables	Frequency (N)	Percentage (%)	
Graduation	Anatolian High School	120	71,9
	Anatolian Imam Hatip High School	20	12
	Science High School	5	3
	Social Sciences High School	2	1,2
	Vocational and Technical High School- Computer Department	1	0,6
	Vocational and Technical High School- Other Departments	5	3,0
	Others	14	8,4
Total	167	100	
Monthly Income Level (₺)	0-999	83	49,7
	1000-2999	55	32,9
	3000-5999	20	12
	6000+	9	5,4
	Total	167	100

When Table 3.1. regarding the sociodemographic characteristics of the PTEs participating in the research is examined, it is seen that the number of male participants is 53 (31.7%) and the number of female participants is 114 (68.3%). Among them, 4 (2.4%) of the participants are 19, 28 (16.8%) of the participants are 20, 72 (43.1%) of the participants are 21, 34 (20.4%) of the participants are 22 years old, and the remaining 29 (17.4%) participants are 23 years old and over. While the number of prospective teachers of English studying in the 3rd grade is 63 (37.7%), the number of those studying in the 4th grade is 104 (62.3%). Among the PTEs, 120 (71.9%) graduated from Anatolian High School, 20 (12%) graduated from Anatolian Imam Hatip High School, 5 (3%) graduated from Science High School, 2 (1.2%) graduated from Social Sciences High School, 1 (0,6%) graduated from Vocational and Technical High School-Computer Department, 5 (3%) graduated from Vocational and Technical High School-Other Departments, and the remaining 14 (8.4%) graduated from other types of high schools. And 83 (49.7%) stated that they have a monthly income of 0-999 ₺, 55 (32.9%) stated that they have a monthly income of 1000-2999 ₺, 20 (12%) stated that they have a monthly income of 3000-5999 ₺ and 9 (5.4%) stated that they have a monthly income of over 6000 ₺.

The frequency and percentage values according to the demographic characteristics of the Teacher Trainers of English who participated in this study are presented in Table 3.2.

Table 3.2. Frequency and Percentage Values of TTE's by Sociodemographic Characteristics

Variables		Frequency (N)	Percentage (%)
Gender	Male	2	25
	Female	6	75
	Total	8	100
Age	35-44	5	62,5
	45-54	3	37,5
	Total	8	100
Years of Experience	6-10	1	12,5
	11-15	2	25
	16-20	2	25
	21-25	2	25
	26+	1	12,5
	Total	8	100
Degree	MA	1	12,5
	Ph.D.	7	87,5
	Total	8	100
Numbers of Course Given Related to 21 st Century Skills	1	5	62,5
	3	3	37,5
	Total	8	100

When Table 3.2. regarding the sociodemographic characteristics of the TTEs participating in the research is examined, it is seen that the number of male participants is 2 (25%) and the number of female participants is 6 (75%). When the ages of the participants are examined, it is seen that 5 (62,5%) of the participants are between 35-44 years old, and 3 (37,5%) of the participants are between 45-54 years old. When the years of experience of the participants are examined, it is seen that 1 (12,5%) of the participants has 6-10 years, 2 (25%) of the participants have 11-15 years, 2 (25%) of the participants have 16-20 years, 2 (25%) of the participants have 21-25 years, and finally 1 (12,5%) of the participants have 26 years or more experience. Among the TTEs, 1 (12,5%) has a degree of MA, and 7 (87,5%) have a degree of Ph.D. Among the TTEs, 5 (62,5%) taught 1 course related to 21st century skills, technology, and 4C skills and 3 (37,5%) taught 3 different courses related to 21st century skills, technology, and 4C skills. To sum up, 5 (62,5%) of TTEs have experience of teaching a course related to Technology, 5 (62,5%) of TTEs have experience of teaching a course related to 21st Century Skills, and 4 (40%) of TTEs have experience of teaching a course related to 4C Skills.

3.3. Data Collection Tools and Techniques

The required legal permission was obtained from the Rectorate of Necmettin Erbakan University to apply both the 21st Century Skills and Competences Scale and the semi-structured interview questions selected to be used in the study to the 3rd and 4th-grade prospective teachers of English studying at the department of English Language Teaching at

Necmettin Erbakan University in the 2022-2023 academic year, and to the teacher trainers of English currently working in the department of English Language Teaching at Necmettin Erbakan University. The data collection tool used in the study consists of three main parts. In the first part of the study, there are questions to determine the demographic characteristics of the participants such as gender, age, grade, graduation, monthly income level for PTEs, and gender, age, years of experience, degree, numbers of course given related to 21st century skills, technology, and 4C skills for TTEs. In the second part of the study, in line with the problem statement of this study, the “21st Century Skills and Competences Scale Directed at Teacher Candidates” developed by Anagün et al. (2016) is used to measure students’ awareness levels of 21st century skills. And in the third and last part of the study, a semi-structured interview (Bedir, 2019) adapted in the light of the results to be obtained from the questionnaire which was applied in the first place was used to obtain deeper and further information. Thus, the collected data yields both quantitative and qualitative results.

3.3.1. 21st century skills and competences scale

“21st Century Skills and Competences Scale” was developed by Anagün et al. in 2016. During the development phase, the authors reviewed the literature by considering all dimensions of 21st century skills, and then 70 items related to 21st century skills were determined. After the expert opinion, the items that did not provide content validity were removed from the scale, and the scale was applied to the 686 teacher candidates for preliminary evaluation. The obtained data were used in exploratory and confirmatory factor analysis. Finally, the construct validity and reliability of the scale were calculated using different methods. So, the scale was given its final shape. The calculated values proved that the scale had high reliability and construct validity scores. This 42-item scale has 3 sub-dimensions: “*Learning and Renewal Skills*” (16 items), “*Life and Career Skills*” (18 items), and “*Knowledge, Media and Technology Skills*” (8 items). Items in the scale applied in a five-point Likert structure as “*Always. (5)*”, “*Frequently. (4)*”, “*Sometimes. (3)*”, “*Rarely. (2)*”, and “*Never. (1)*”. That is to say, the score range that the participants receive varies between “42-210”. Necessary permission processes were followed to use the scale within the present study.

After the data collected for the present study was transferred to the IBM SPSS 26 program, it was first checked whether there was a reverse item in the scale used to prepare the data for analysis. Only Item 27 was found to be reverse. The presence of missing data was

checked through the program and no missing value was found. The reliability score of the scale used was calculated with the data obtained as a result of the application made within the scope of the study. While the Cronbach's value of the "21st Century Skills and Competences Scale" developed by Anagün et al. (2016) was .88, the Cronbach's value calculated in this study was found to be .91. This scale was applied only once in the research, participants were asked to choose the option that best reflects their feelings about each statement, and the higher the score, the higher the participants' awareness of 21st century skills was evaluated.

3.3.2. Semi-structured interview

In the final part of the study, participants' perceptions about their awareness on 21st century skills were assessed by using an adapted interview form to have a deeper understanding of the findings. This adapted interview was created by making use of the open-ended interview questions of Bedir (2019) and in the light of the results obtained from the questionnaire which was applied before. The interview questions were checked and finalized under the guidance of field experts. It was conducted by the researcher herself with 20 purposefully selected PTEs on a voluntary basis by using the focus group technique, and 4 randomly selected voluntarily TTEs individually. The process was completed when data saturation is reached. 4 different focus groups of five participants were formed by the researcher. The first group was composed of 3rd-grade PTEs whose scores from the scale were above the median, the second group was composed of 3rd-grade PTEs whose scores from the scale were below the median, the third group was composed of 4th-grade PTEs whose scores from the scale were above the median, and the fourth group was composed of 4th-grade PTEs whose scores from the scale were below the median.

Below are the interview questions for the PTEs:

1. How important do you think 21st century skills are in English Language Teaching? What do you think are the most effective skills here?
2. Do you find yourself sufficient in terms of your individual awareness of 21st century skills? How did/do you improve yourself? Do internships, preparation for KPSS exam, or curriculum courses guide you in this regard?
3. Do you think 21st century skills are effectively taught in the course contents? In which course contents do you think 21st century skills are taught more effectively? Why?

4. If there is a subject you would like to add to the curriculum of the English Language Teaching department within the framework of 21st century skills, what would it be? Why?

Below are the interview questions for the TTEs:

1. How important do you think 21st century skills are in English Language Teaching? What do you think are the most effective skills here?
2. Do you find yourself sufficient in terms of your individual awareness of 21st century skills? How did/do you improve yourself?
3. Which courses do you mainly teach in the department? How do you personally use 21st century skills in your courses? How do you see yourself integrating 21st century skills into language teaching?
4. Do you give importance to your students' awareness of 21st century skills? What kind of effort are you in (on a student basis) in this regard?

3.4. Data Collection

This study is carried out with a total of voluntarily participated 167 PTEs and 8 TTEs, including 3rd and 4th-grade prospective teachers of English studying at the ELT department of Necmettin Erbakan University in the 2022-2023 academic year, and all TTEs training them in the same department of the university. The data is collected by the researcher herself in a 4-weeks period between January and February 2023. To gather the quantitative data, the consent of the participants was requested first, and then a survey which was presented through Google Forms by the researcher including both the questions related to the sociodemographic characteristics of the participants and the items of "21st Century Skills and Competences Scale Directed at Teacher Candidates" developed by Anagün et al. (2016) was administered. For the collected data to give accurate results, necessary explanations were given to the participants face-to-face before the implementation, and students were clearly given instructions. 167 PTEs and 8 TTEs voluntarily filled out the scale, and the analysis was made on the scores of these 175 participants. After reaching the targeted number of participants, a semi-structured interview was conducted with purposefully selected 20 PTEs depending on their score levels, and randomly selected 4 TTEs training in the ELT department, a total of 24 participants, by the researcher to gain in-depth knowledge on their awareness on 21st century skills.

3.5. Data Analysis

The data collected through quantitative and qualitative ways were analysed. After the questionnaire which was presented through Google Forms by the researcher included both the questions related to the sociodemographic characteristics of the participants, and the items of “*21st Century Skills and Competences Scale Directed at Teacher Candidates*” developed by Anagün et al. (2016) was administrated online by the researcher, and the data was prepared to be analysed. When the data were collected, it was seen that all the participants filled the form correctly, so it was seen that there was not any form that have not been filled in properly to be eliminated. After the scores were checked for reliability (Cr. .91), a normality test was employed. Found to be reliable and having normal distribution, the data was ready to be studied thoroughly. Arithmetic mean, standard deviation, median, percentage, frequency, variance, and t-test analysis were assessed according to the variable by processing the data into SPSS 26.0 package program to get the quantitative results of this study.

Based on the quantitative findings of this study, content analysis was used to analyse the perceptions of the participants about their awareness on 21st century skills through the responses given for the semi-structured interview questions conducted by the researcher to get the qualitative results of this study. Content analysis is one of the techniques used in research that include qualitative data. The basic approach in the content analysis technique is to organize the obtained data in such a way that concepts can be explained and then investigated the relations of these concepts with each other (Yıldırım & Şimşek, 2016). Here, a ranking was created according to the results obtained from the scale used in the previous stage, and then the participants who were below and above the median were determined. Accordingly, four different groups of PTEs were created: 3rd-grade PTEs whose scores from the scale were below the median, 3rd-grade PTEs whose scores from the scale were above the median, 4th-grade PTEs whose scores from the scale were below the median, and 4th-grade PTEs whose scores from the scale were above the median. The answers given by the PTEs and TTEs, who had different levels of awareness, to the questions constituted the qualitative data of the present study. The data obtained from the interview form consisting of open-ended questions were coded with content analysis and divided into categories. After this process was completed, data analysis was completed and so the findings of the research were reached. The responses given by the participants during the semi-structured interview were given in the findings under the related headings in an unbiased and detailed way.

CHAPTER 4

4. FINDINGS

In this part of the study, findings related to the problem statement of the study and the results of the analysis of the participants' data are presented.

4.1. Findings on PTEs' Awareness Levels on their 21st Century Skills

In the first main problem of the study, awareness levels of PTEs on their 21st century skills were examined within the scope of '*Learning and Renewal Skills*', '*Life and Career Skills*', '*Information Media and Technology Skills*' by using the "*21st Century Skills and Competences Scale*" developed by Anagün et al. (2016). Since a ranking was made according to the total scores of the participants in the interview to be held later, the scale was considered as a whole during the analysis. Therefore, the 3 sub-dimensions of the scale were not evaluated separately as '*Learning and Renewal Skills*', '*Life and Career Skills*', and '*Knowledge, Media and Technology Skills*'. The score range of the participants was evaluated between "42-210", so the lowest score was considered as 42 and the highest score was considered as 210.

4.1.1. Frequency and percentage values of PTEs' awareness levels on their 21st century skills by median

Frequency and percentage values of PTEs' awareness levels on their 21st century skills by median are given in Table 4.1.

Table 4.1. Frequency and percentage values of PTEs' awareness levels on their 21st century skills by median

		Frequency (N)	Percentage (%)
PTEs' Levels of Their Awareness on 21st Century Skills	High	79	47,3
	Low	88	52,7
	Total	167	100

Information on the PTEs' awareness levels on their 21st century skills participating in the research is given in Table 4.1. When the data are analysed according to the median, it is observed that 79 (47,3%) of the PTEs have a high level of awareness on their 21st century skills while the remaining 88 (52,7%) PTEs have a low level of awareness on their 21st century skills (m=168).

4.1.2. Independent samples T-test results of PTEs' awareness levels on their 21st century skills in terms of "gender"

For the applicability of the T-test, the test assumptions were examined. First, it was checked whether the normality of distribution and extreme values exist or not. It was seen that there were no extreme values in the data set when the boxplots were examined (See Table 4.2.).

Table 4.2. Normality test results in terms of "gender".

	Gender	Kolmogorov-Smirnov			Shapiro-Wilk			Skewness- Kurtosis	
		Statistic	df	Sig.	Statistic	df	Sig.	Statistic	Statistic
Total	Male	.099	53	.200	.970	53	.209	-.594	.442
	Female	.056	114	.200	.992	114	.757	-.114	.491

Considering the Kolmogorov-Smirnov test results, the scores of female and male PTEs showed a normal distribution ($p > .05$). And, Skewness and Kurtosis values were found to be in the appropriate range (Tabachnick & Fidell, 2013). It was observed that the group was normally distributed when the histogram graph was examined. Therefore, the data was used as it was, without making any changes and modifications to the data or the use of a non-parametric alternative test. Since Levene's test of equal variances did not give a significant p-value, the homogeneity of variances was in question. Therefore, for the independent samples t-test results, the option with equal variance assumption was considered.

Table 4.3. Independent samples T-test results of PTEs' awareness levels on their 21st century skills in terms of "gender"

		N	\bar{X}	SD	SE	t	p	Cohen's d
PTEs' Awareness Levels on Their 21st Century Skills	Male	53	166,65	18,76	2,577	0,392	0,697	0,06
	Female	114	165,60	14,86	1,391			

In order to test whether levels of their awareness on 21st century skills in terms of gender, the independent samples T-test was applied. Independent samples T-test results of PTEs' awareness levels on their 21st century skills in terms of gender are given in Table 4.3.

When the group data were analysed, the mean of 21st century skills awareness levels of female PTEs was found to be 165.60 ($n = 114$; $SD = 14,86$), while the mean of 21st century skills awareness levels of male PTEs was found to be 166.65 ($n = 53$; $SD = 18,76$). According to the independent samples T-test results, PTEs' awareness levels on their 21st century skills did not show a significant difference in terms of gender. $t(165) = 0.392$, $p > .05$.

4.1.3. Independent samples T-test results of PTEs' awareness levels on their 21st century skills in terms of "grade"

For the applicability of the T-test, the test assumptions were examined. First, the presence of normality and extreme values were checked. It was seen that there were no extreme values in the data set when the boxplots were examined (See Table 4.4.).

Table 4.4. Normality test results in terms of "grade".

	Grade	Kolmogorov-Smirnov			Shapiro-Wilk			Skewness- Kurtosis	
		Statistic	df	Sig.	Statistic	df	Sig.	Statistic	Statistic
Total	3rd grade	.119	63	.027	.951	63	.015	-.744	.655
	4th grade	.054	104	.200	.993	104	.877	-.057	.114

According to the Kolmogorov-Smirnov test results, the scores of the 3rd and 4th-grade PTEs did not show a normal distribution ($p < .05$). However, Skewness and Kurtosis values were found to be in the appropriate range (Tabachnick & Fidell, 2013). It was observed that the group was normally distributed when the histogram graph was examined. Therefore, the data was used as it was, without making any changes and modifications to the data or the use of a non-parametric alternative test. There was homogeneity of variances since Levene's Test of Equal Variances did not give a significant p-value. Therefore, the option with an equal variance assumption was considered for the independent samples T-test results.

Table 4.5. Independent samples T-test results of PTEs' awareness levels on their 21st century skills in terms of "grade"

		N	\bar{X}	SD	SE	t	p	Cohen's d
PTEs' Awareness Levels on Their 21st Century Skills	3rd Grade	63	161,78	16,15	2,035	-2,627	0,009	-0,42
	4th Grade	104	168,43	15,69	1,539			

In order to test whether levels of their awareness on 21st century skills in terms of grade, the independent samples T-test was applied. Independent samples T-test results of PTEs' awareness levels on their 21st century skills in terms of grade are given in Table 4.5.

When the group data were analysed, the mean of the 21st century skills awareness levels of the 3rd-grade PTEs was found to be 161,78 ($n = 63$; $SD = 16,15$), while the mean of the 21st century skills awareness levels of the 4th-grade PTEs was found to be 168,43 ($n = 104$; $SD = 15,69$). According to the independent samples t-test results, PTEs' 21st century skills awareness levels showed a significant difference in terms of grade. $t(165) = -2.628$, $p < .05$.

4.1.4. One-way variance analysis of PTEs' awareness levels on their 21st century skills in terms of "monthly income level"

One-way variance analysis of PTEs' awareness levels on their 21st century skills in terms of monthly income level are given in Table 4.6.

Table 4.6. One-way variance analysis of PTEs' awareness levels on their 21st century skills in terms of "monthly income level"

Monthly Income Level (₺)	N	\bar{X}	SD	SE	Welch	p	partial η^2
0-999	83	165,16	16,96	1,861	0,12	0,95	0,003
1000-2999	55	166,33	12,33	1,663			
3000-5999	20	167,30	19,07	4,264			
6000+	9	167,44	23,62	7,872			
Total	167	165,92	16,15	1,249			

A one-way ANOVA analysis was conducted to test whether PTEs' levels of their awareness on 21st century skills change by their monthly income level variable. In the analysis, income level was divided into 4 groups as 0-999 ₺ (n = 83), 1000-2999 ₺ (n = 55), 3000-5999 ₺ (n = 20), and over 6000 ₺ (n = 9). According to the boxplot analysis, it was seen that there was no extreme data. When histogram graphs were examined, it was observed that the distributions were close to normal. In addition to the histogram graphs, the distribution was accepted as normal since the value found by dividing the Skewness-Kurtosis values by the standard error was less than 3.19 (Tabachnick & Fidell, 2013). Levene's statistics were examined in order to understand whether the variances were equal, and since the p values of the 21st century skills awareness levels of PTEs were statistically significant ($p < .05$), the assumption of homogeneity of the variances was not met. The ANOVA test revealed that PTEs did not show significant differences between their awareness levels on 21st century skills and the income level variable Welch (3, 28,84) = 0.12, $p > .05$, partial $\eta^2 = .003$.

When the data were analysed, it was seen that PTEs' awareness levels on their 21st century skills was found to be $M = 165,16$ $SD = 16,96$ in the group with a monthly income level of 0-999 ₺, $M = 166,33$, $SD = 12,33$ in the group with a monthly income level of 1000-2999 ₺, $M = 167,30$, $SD = 19,07$ in the group with a monthly income level of 3000-5999 ₺, and $M = 167,44$, $SD = 23,62$ in the group with a monthly income level of over 6000 ₺.

4.2. Findings on TTEs' Awareness Levels on their 21st Century Skills

In the second main problem of the study, awareness levels of TTEs on their 21st century skills were examined within the scope of 'Learning and Renewal Skills', 'Life and

Career Skills, *Information Media and Technology Skills* by using the “21st Century Skills and Competences Scale” developed by Anagün et al. (2016). Since a ranking was made according to the total scores of the participants in the interview to be held later, the scale was considered as a whole during the analysis. Therefore, the 3 sub-dimensions of the scale were not evaluated separately as *Learning and Renewal Skills*, *Life and Career Skills*, and *Knowledge, Media and Technology Skills*. The score range of the participants was evaluated between “42-210”, so the lowest score was considered as 42 and the highest score was considered as 210.

4.2.1. Frequency and percentage values of TTEs’ awareness levels on their 21st century skills by median

Frequency and percentage values of TTEs’ awareness levels on their 21st century skills by median are given in Table 4.7.

Table 4.7. Frequency and percentage values of TTEs’ awareness levels on their 21st century skills by median

		Frequency (N)	Percentage (%)
TTEs’ Awareness Levels on Their 21st Century Skills	High	3	37,5
	Median	2	25
	Low	3	37,5
	Total	8	100

Information on the TTEs’ awareness levels on their 21st century skills participating in the research was given in Table 4.7. When the data were analysed according to the median, it was observed that 3 (37,5%) of the TTEs had a high level of awareness on their 21st century skills, 2 (25%) of the TTEs had the same score with the median, and the remaining of 3 (37,5%) had a low level of awareness on their 21st century skills (m=186).

4.3. Findings on PTEs’ Perceptions about their Awareness on 21st Century Skills

In the third main problem of the study, perceptions about PTEs’ awareness on 21st century skills were examined through semi-structured interview questions. Content analysis of the data obtained through a semi-structured interview form consisting of open-ended questions was done. The findings obtained as a result of the study were divided into two categories as themes and sub-themes for each group of participants. There are 8 main themes and 25 sub-themes for PTEs. The main themes are presented in Table 4.8.

Table 4.8. Main themes on PTEs' perceptions about their awareness on 21st century skills.

Participants	Theme Number	Theme Name
PTEs	P1	The significance of 21st century skills in ELT
	P2	The most effective 21st century skills in ELT
	P3	Self-awareness on 21st century skills
	P4	Personal development in 21st century skills
	P5	Effectiveness of curriculum courses, KPSS, and internship
	P6	21st century skills in course contents
	P7	Courses in which 21st century skills are taught more effectively
	P8	Courses to be added to the ELT curriculum

4.3.1. The significance of 21st century skills in ELT

Question 1 in the semi-structured interview was “*How important do you think 21st century skills are in English Language Teaching?*”. The sub-themes related to the replies of PTEs are shown in Table 4.9.

Table 4.9. Sub-themes regarding PTEs' responses on the significance of 21st century skills in ELT.

	Sub-themes	N	%
Important		20	100
Total		20	100

All (100%) PTEs who participated in this study think that 21st century skills are ‘*Important*’ in English Language Teaching. The opinions of PTEs reflecting this situation are given below:

“A certain amount of creativity, intercultural curiosity, social relations, etc. is of great importance not only in English Language Teaching but also in learning and teaching all languages. Even just the skills required to learn a language show how important all 21st century skills are.” (PTE1)

“I think it is very important, especially for us as prospective teachers and teachers. Because I think that the more we have these skills, the more permanent we can make teaching for students.” (PTE2)

“I think they are extremely important. Especially in the field of teaching, new methods and new approaches are constantly being developed both technologically and educationally. ... If we want to be good teachers, we need to be ready to adapt to 21st century skills as quickly as possible because there is a constantly evolving world, a constantly evolving technology. And if we want to perform our profession well, we must keep up with these changes.” (PTE3)

“21st century skills are of great importance not only in English Language Teaching but also in the teaching of all languages, because we, as prospective teachers, contribute to the upbringing of a generation. The more critically we can impart knowledge to our students, the more our students learn and apply it.” (PTE5)

“I think we can be a little more productive thanks to 21st century skills in English Language Teaching. We can teach language in new ways more creatively. That’s why I think 21st century skills are very important.” (PTE9)

“I think 21st century skills are extremely important because 21st century skills and English Language Teaching are inseparable parts. 4C skills, I think, already form the basic structure of materials created in the English language.” (PTE14)

“I think 21st century skills are important in terms of making teaching more understandable. Thanks to 21st century skills, students' prejudices against language can be broken and they can be made permanent by putting them into practice.” (PTE8)

“Today, I think these skills are important in every human interaction. For this reason, 21st century skills are also important in English Language Teaching.” (PTE18)

4.3.2. The most effective 21st century skills in ELT

Question 2 in the semi-structured interview was *“What do you think are the most effective skills here?”*. The sub-themes regarding PTEs’ responses are shown in Table 4.10. Some PTEs expressed opinions for more than one sub-theme.

Table 4.10. Sub-themes regarding PTEs’ responses on the most effective 21st century skills in ELT.

	Sub-themes	f	%
4C Skills	Communication Skills	12	60
	Collaboration Skills	10	50
	Critical thinking Skills	10	50
	Creativity Skills	8	40
	Information, Media and Technology Literacy (ICT) Skills	6	30
	Entrepreneurship Skills	1	5
	All of these connected to each other, they are not separable	1	5
Total	20	100	

The term *‘Communication Skills’* was the most emphasized skill among 21st century skills by 12 replies. The opinions of PTEs reflecting this situation are given below:

“Communication is the most important skill in English Language Teaching because language is a living thing, and the most important function of language is to provide communication between people.” (PTE1)

“All skills are very important, but if I have to choose one, I will say communication because if a person cannot communicate, a person cannot perform other skills. That is, the person must establish communication first.” (PTE5)

“Although it is not quite right to separate them as 21st century skills, since we are talking about language teaching, the most important skill here in the context of language teaching is communication. Because the purpose of language is to communicate. So, I think communication is the most effective skill.” (PTE10)

“I think the most effective 21st century skill is communication because we know that English is the world language and one of the biggest reasons why we learn this language is to be able to communicate both with each other and with the world. In this sense, I think we need ‘communication skills’ to have full proficiency in this language and to give this proficiency to our students.” (PTE16)

The term ‘*Collaboration Skills*’ was replied to 10 times by PTEs. The opinions of PTEs reflecting this situation are given below:

“I think the most effective one is cooperation. Because, if we can assign tasks to our students in a way that requires cooperation, we will contribute to the development of their social skills and learning from each other.” (PTE2)

“I think the most effective skills in this field are communication and collaboration. Because language needs communication to fulfill its function. Since education is a reciprocal thing, teacher and student should cooperate.” (PTE18)

“I think collaboration because children, especially young children, learn better by communicating and collaborating with their peers. In other words, language acquisition is easier when social relations are strong. And since they are children of their own level, they learn better by looking at each other, talking to each other.” (PTE20)

The term ‘*Critical Thinking Skills*’ was also replied to 10 times by PTEs. The opinions of PTEs reflecting this situation are given below:

“I think critical thinking is important because we need to think critically so that we can improve ourselves.” (PTE8)

“...The importance of critical thinking, which should be used in speech and self-expression as well as communication, is undeniable among 21st century skills.” (PTE10)

The term ‘*Creativity Skills*’ was replied to 8 times by PTEs who thinks that the most effective skill among 21st century skills is ‘Creativity’. The opinions of PTEs reflecting this situation are given below:

“I think creativity is important to develop new methods in language teaching.” (PTE9)

“...We cannot use 21st century skills much, but I think the most important ones are collaboration and creativity. I am not someone who can think and produce many new and different ideas, but if I had such skills, my academic life would have progressed more easily for me.” (PTE7)

The term ‘*Information, Media and Technology Literacy Skills*’ was replied to 6 times by PTEs. The opinions of PTEs reflecting this situation are given below:

“I think the most effective skill is information, media, and technology literacy, that is, information literacy, media literacy and information and communication technologies may be sufficient for humans. I think the use of technology is important for both teachers and students.” (PTE12)

“The most important of these skills for me is technology literacy because I prefer individual learning more, I can access up-to-date information faster, and I also try to use this skill as much as possible in my Teaching Practice course.” (PTE19)

“I think the most effective skills here are creativity, critical thinking, communication, collaboration, analysis, ICT literacy, and entrepreneurship.” (PTE11)

There is 1 (5%) PTE who thinks that ‘*All 21st century skills are connected to each other, they are not separable*’. The opinion of PTE reflecting this situation is given below:

“In my opinion, there is no such thing as the most effective. If there was such a thing as the most effective, we would only talk about it, we would not give it as a 4C. I think they all

have a connection to each other, so none of them can be used separately from each other.”
(PTE6)

4.3.3. Self-awareness on 21st century skills

Question 3 in the semi-structured interview was *“Do you find yourself sufficient in terms of your individual awareness of 21st century skills?”*. The sub-themes regarding PTEs’ responses are shown in Table 4.11.

Table 4.11. Sub-themes regarding PTEs’ responses on their self-awareness on 21st century skills.

Sub-themes	N	%
Sufficient	13	65
Insufficient	7	35
Total	20	100

There are 13 (65%) PTEs who participated in this study find themselves ‘*Sufficient*’ in terms of their individual awareness of 21st century skills. The opinions of PTEs reflecting this situation are given below:

“I think I am sufficient in terms of awareness but I am inadequate in terms of practice at previous education levels or the university because I have not seen an application for this in my own lessons throughout my education life.” (PTE6)

“... Although 21st century skills are a very broad subject, many skills complement each other so I can't separate them, I think my awareness is sufficient.” (PTE12)

“I think that my awareness is at a sufficient level, but I find it difficult to put these skills into practice because 21st century skills are a very broad field. It is difficult for me to bring each of them to life.” (PTE13)

“I find myself sufficient in 21st century skills, but I believe that I need to develop these skills more.” (PTE17)

There are 7 (35%) PTEs who participated in this study find themselves ‘*Insufficient*’ in terms of their individual awareness of 21st century skills. The opinions of PTEs reflecting this situation are given below:

“I think I am insufficient because I think these skills can change over time. Since being alive means constantly learning, I think it is wrong to think that a person can be wholly sufficient in one area.” (PTE1)

“I think I am not sufficient because in the education I received, there was an environment where only what the teacher said was done and only the teacher could speak. Therefore, unfortunately, I could not reach the desired level in 21st century skills.” (PTE8)

“I am not fully sufficient because, when I think about myself, I don’t remember ever being guided on this subject and I don't think there were many lectures on this subject.” (PTE9)

“I do not consider myself sufficient because I think 21st century skills are a rapidly developing field. So, I don’t think it’s likely that people can be fully aware of these skills. Still, I try to raise my awareness as much as I can.” (PTE14)

4.3.4. Personal development in 21st century skills

Question 4 in the semi-structured interview was *“How did/do you improve yourself?”*. The sub-themes regarding PTEs’ responses are shown in Table 4.12. Some PTEs expressed opinions for more than one sub-theme.

Table 4.12. Sub-themes regarding PTEs’ responses on their personal development in 21st century skills.

Sub-themes	f	%
Social exchange	26	130
Making use of technology in terms of theory and practice	12	60
Lack of personal development	4	20
Total	20	100

The sub-theme ‘*Social Exchange*’ was the most emphasized sub-theme among other sub-themes by 26 replies. That is, PTEs who participated in this study think that they improve themselves within the scope of ‘*Social Exchange*’ the most. The opinions of PTEs reflecting this situation are given below:

“I think I develop myself by communicating with people. Coaching by some of our teachers at the university, my own experiences and my friend environment have improved me. ... The university offered me different perspectives as I acculturated with people from other parts of Turkey in this environment. That is the reason I can say ‘I saw 21st century skills practically, not by opening a book.’. Moreover, I have a group of friends with whom we make movies and book critiques. This is perhaps one of the most important reasons why I am creative, self-confident, self-respecting, and self-directed, and questioning and understanding whether a piece of information is true or false. Thanks to the movie critiques we made, I can

see that my creativity has improved, and I can see things from different perspectives. ...”
(PTE4)

“We should not expect everything from school, sometimes we must learn some things on our own. For this, we must seize the opportunities that come our way. I do not think I can do much to improve my skills, but I am trying to take advantage of the opportunity I am in right now. I am an Erasmus+ exchange student, so I am in Poland now. I am intertwined with many cultures; therefore, I think my communication skills will improve more here.” (PTE5)

“I try to improve myself with elective courses such as “Critical and Analytical Thinkin”g or by watching videos that I see on the internet that can be useful.” (PTE6)

“...I think I have improved myself on this topic after attending university because we have made presentations collaboratively, we have tried to think of new things. There were no such things in elementary school, middle school, and high school. Our teachers have not even wanted us to talk....” (PTE8)

“I always try to improve myself to be competent. At this point, I try not only to read an article but also to criticize what I read. Besides, I try to participate in different group activities-social activities....” (PTE10)

“I use social media and the internet a lot, but I like talking to experienced teachers, and imposing their thoughts on my life more. For example, if there is a problem with the student, I call my teachers whom I know and love, and ask them questions such as what they would do if they were in the same situation. These are more effective for me.” (PTE13)

“I think that I have developed some of my 21st century skills with experience, I can improve myself with the experiences of some of my teachers. Of course, I get up-to-date information, but experiences help me more.” (PTE19)

The sub-theme ‘*Making use of technology in terms of theory and practice*’ was emphasized in the second by 12 replies. That is, more than half of the PTEs who participated in this study think that they improve themselves within the scope of ‘*Making use of technology in terms of theory and practice*’. The opinions of PTEs reflecting this situation are given below:

“...I try to watch videos that come across on YouTube or Instagram, have different topics, provide different perspectives....” (PTE11)

“Especially Instagram helps me in this regard because there are some teachers who shoot videos in their classes at the primary and secondary school levels. They show sample materials, we can see how they use them in their classrooms, and how their classroom management is. ...” (PTE12)

“Instagram and YouTube are even more successful than school in this regard, we can say that we have learned many things from them. In addition, applications such as Canva, where design can be made and materials can be designed, have taught me a lot. I learned a lot, especially from their Tutorial parts....” (PTE14)

“Websites, social media, and movie critiques are effective in improving ourselves. In fact, we can discover new websites by looking at the sites shown by our lecturers. This is also an opportunity for us.” (PTE15)

The sub-theme ‘*Lack of personal development*’ was the least emphasized sub-theme among other sub-themes by 4 replies. That is, PTEs who participated in this study think that they improve themselves within the scope of ‘*Lack of personal development*’ the least. The opinions of PTEs reflecting this situation are given below:

“I cannot say that I have a lot of opportunities to improve myself about these skills outside of school because I am mostly at home. Compared to campus life, we entered a much more stagnant period in terms of communication. After the earthquake happened in Turkiye, almost all students are in their homes. Therefore, we can say that we have a communication interruption.” (PTE3)

“...I don’t think I’m doing anything to improve myself.” (PTE7)

“When I think of myself, I do not think I have ever been guided or taught much about this topic. It can be said that I do not try to improve myself.” (PTE9)

4.3.5. Effectiveness of curriculum courses, KPSS exam, and internship

Question 5 in the semi-structured interview was “*Do curriculum courses, preparation for KPSS exam, or internship guide you in this regard?*”. The sub-themes regarding PTEs’

responses are shown in Table 4.13. Some PTEs expressed opinions for more than one sub-theme.

Table 4.13. Sub-themes regarding PTEs’ responses on the effectiveness of curriculum courses, KPSS exam, and internship.

Sub-themes	<i>f</i>	%
Curriculum courses contribute to my personal development	14	70
Studying for KPSS contributes to my personal development	3	15
Internship contributes to my personal development	9	45
Total	20	100

PTEs who participated in this study think that ‘*Curriculum courses contribute to their personal development*’, and it was replied to the most by 14 replies. The opinions of PTEs reflecting this situation are given below:

“In terms of undergraduate courses, I think 21st century skills are effectively taught in most courses. For example, we make group presentations in our field courses, or our teachers ask us for creative things. For this, we need to think creatively. Or in non-field elective courses, our instructors usually encourage us to speak, convey our thoughts, and support us in this regard.” (PTE8)

“... Especially in our curriculum courses, I saw a practical application in general. So, their influences were huge. We learned how to prepare a lesson plan, how to prepare a presentation, how to work with a group, etc. That is, we learned 21st century skills by living in this process. Not only with the anxiety of grades but also it becomes a sharing among friends, and acquaintances begin, for example, we have seen that it influences them. That’s why the curriculum courses were very useful for me. ...” (PTE14)

“I think internship and curriculum courses are visibly related to each other. For example, we can apply the information we learned in the curriculum courses this year and previous years at the schools where we did our internship. This is very important in terms of improving ourselves. That’s why I think the internship and the curriculum courses improve us. ...” (PTE15)

“In the second semester of my third year, I took a course called ‘Critical Thinking and Analytics’. ... In fact, it was such a useful lesson that I took it at a time when I didn't even know how to think critically. Our lecturer gave us a place where we could think critically and use a lot of techniques, and we presented this in the classroom in a way. It was a useful

course, one of the most productive elective courses I have ever taken, so I learned a lot. That is why I think curriculum courses are beneficial if we choose them correctly.” (PTE16)

PTEs who participated in this study think that ‘*Studying for KPSS contributes to their personal development*’, and it was replied to the least by 3 replies. The opinions of PTEs reflecting this situation are given below:

“... KPSS is purely theoretical knowledge, but theory is also needed in every field. There is a prejudice against the exam, but even though there are many details while reading, there are some points that I definitely think a prospective teacher should know.” (PTE14)

“While I was studying KPSS, I learned that the psychology of the students is important, that is, we need to communicate with students in a psychological way. For example, I learned that we could contribute more to the learning process by giving conditioning principles or rewards and reinforcements. ... In short, this situation improves my communication with my students.” (PTE20)

PTEs who participated in this study think that ‘*Internship contributes to their personal development*’, and it was replied to 9 times. The opinions of PTEs reflecting this situation are given below:

“... I think the internship is the most effective one here, it definitely helps me to improve myself. Good and bad things happen, people learn from the bad as well as from the good. That’s why I think the internship is very effective: there is a situation of observation and being involved. And I think the best way to learn something is to observe and do it. ...” (PTE14)

“... I mostly focus on the experiences of my lecturers and internship consultants. As they talk about their experiences, I say ‘Yes, they can really be like this.’. For example, during my internship, I was told something: ‘The internship expects you to address a lot of students and convey something to them in a very limited time.’. I had a lot of trouble using a language that students could understand in such a short time. That’s why I always focused on the experiences of my teachers and learned about them. Therefore, I can say that the internship helped me the most in this regard. The experiences of my advisor and all the teachers I know have guided me in this regard: how can I collaborate, how can I work more effectively with students, how can I organize them...” (PTE19)

4.3.6. 21st century skills in course contents

Question 6 in the semi-structured interview was “Do you think 21st century skills are effectively taught in the course contents?”. The sub-themes regarding PTEs’ responses are shown in Table 4.14.

Table 4.14. Sub-themes regarding PTEs’ responses on the 21st century skills in course contents.

Sub-themes	N	%
Definitely	4	20
Partially	13	65
Definitely not	3	15
Total	20	100

There are 4 (20%) PTEs who participated in this study think 21st century skills are ‘Definitely’ taught effectively in the course contents. The opinions of PTEs reflecting this situation are given below:

“I am pretty sure that the curricula are geared within the framework of 21st century skills because I remember some of our lecturers put a lot of emphasis on 21st century skills. Even though we are currently in online education, our lecturers set up rooms through online platforms and create environments that allow students to work together (collaborative environment). That’s why I think that 21st century skills are effectively given in the course content.” (PTE4)

“I think the university curriculum is generally good and geared towards 21st century skills. I am particularly satisfied with the course curriculum of the English Language Teaching department. ...” (PTE14)

There are 13 (65%) PTEs who participated in this study think 21st century skills are ‘Partially’ taught effectively in the course contents. The opinions of PTEs reflecting this situation are given below:

“I cannot say they are taught fully effectively. I think that we use 21st century skills more especially in our field courses rather than general culture and vocational knowledge courses, especially when we make presentations with a few people because we use our creativity, and we use collaboration since we work together.” (PTE7)

“I think it is not fully effective. Because of the communication within the group, I think that the lessons we make presentations in groups are more effective than the others.” (PTE9)

“From the moment I got this question, three lessons came to my mind. ... I think that I have improved myself more thanks to these lessons, and I think that my awareness has increased. In one of these courses, we learned 21st century skills in detail and then put them into practice while presenting for final grading. In the second one, we had the opportunity to do an internship within the scope of the course. We had the opportunity to apply the knowledge we learned there, so I think it was effective. In the third one, we learned many things from classroom management to classroom activities, our lecturer also us about different cultures. That is why I think that these three courses are given more effectively than the others.” (PTE12)

“... I think that not all courses improved us in this regard. The important thing is not the content of the course, but the perspectives of the teachers who teach the course. The lecturers improved us in this regard who think like ‘How can I be good to these children?’ rather than ‘It is enough for me to go to class.’. And, I think the field courses were more effective, at least for me. Because elective courses are not considered important by both students and lecturers. ...” (PTE13)

There are 3 (15%) PTEs who participated in this study think 21st century skills are ‘Definitely not’ taught effectively in the course contents. The opinions of PTEs reflecting this situation are given below:

“I believe that the curriculum we follow is old and does not contribute enough to us about 21st century skills. Therefore, these skills are not given effectively in the course contents. The majority of our courses do not have content that allows us to learn 21st century skills. ...” (PTE3)

“For now, I definitely do not think that 21st century skills are effectively given in the course contents. Because 21st century skills have entered our literature very late. In other words, we have just reached the awareness that this information should reach the university curriculum and teachers and be used in education. Therefore, there are steps to try to give, but naturally, it cannot be given effectively yet. Because it's a concept we've only just learned. ...” (PTE10)

4.3.7. Courses in which 21st century skills are taught more effectively

Question 7 in the semi-structured interview was *“In which course contents do you think 21st century skills are taught more effectively? Why?”*. The sub-themes regarding PTEs’

responses are shown in Table 4.15. Some PTEs expressed opinions for more than one sub-theme.

Table 4.15. Sub-themes regarding PTEs’ responses on the courses in which 21st century skills are taught more effectively.

Sub-themes	Courses	f	%	
Non-field Elective Courses	Media Literacy	4	20	
	Culture and Language	3	15	
	Critical Thinking	4	20	
	Turkish Music	1	5	
Field Courses	All Field Courses	5	25	
	Foreign Language Teaching to Children	15	75	
	Drama in English Language Teaching	13	65	
	Critical Reading and Writing	8	40	
	Evaluation of Classroom Learning	6	30	
	Comparative Education	3	15	
	Foreign Language Teaching to Immigrants and Refugees	1	5	
	Approaches in ELT	4	20	
	Instructional Technologies and Material Design	9	45	
	Verbal Communication Skills	2	10	
	Developing Course Content in English Teaching	4	20	
	World Englishes	1	5	
	Language and Literature Teaching	1	5	
	Teaching Practice	2	10	
	English in Mass Communication	1	5	
	Vocational Courses	Morality and Ethics in Education	1	5
		Attention Deficit and Hyperactivity Disorder	1	5
Educational Sociology		1	5	
Educational Philosophy		1	5	
Introduction to Educational Sciences		1	5	
Lifelong Learning		1	5	
Instructional Technologies		2	10	
Total	26	20	100	

PTEs who participated in this study think that 21st century skills are taught more effectively in 26 different course contents. Courses within the scope of ‘*Non-field Elective Courses*’ were emphasized by 12 replies. The opinions of PTEs reflecting this situation are given below:

“I think it is given in field courses as well, but I think it is given more effectively in non-field elective courses. I think these are given more, especially in the field of acculturation and in the courses such as ‘Media Literacy’ and whose scores from the scale were ‘Culture and Language’.” (PTE1)

“... ‘Turkish Music’ is also an elective course outside the field, but I think it has developed us culturally. ...” (PTE2)

“... I think that only one of the non-field elective courses is effective and that is ‘Media Literacy’. I chose that course consciously so that I could improve myself. ...” (PTE12)

Courses within the scope of ‘Field Courses’ were the most emphasized sub-theme among other sub-themes by 75 replies. The opinions of PTEs reflecting this situation are given below:

“... For example, ‘Foreign Language Teaching to Children’ and ‘Drama in ELT’ courses helped us to establish cooperation and work in groups. ...” (PTE2)

“... I think 21st century skills are taught more effectively in the ‘Evaluation of Classroom Learning’, the ‘Critical Reading and Writing’, and the ‘Comparative Education’ course.” (PTE3)

“... I had to develop these skills, especially in the ‘Foreign Language Teaching to Children’ course. ‘Drama in ELT’ course was also like this, we had to use our collaboration skills a lot.” (PTE5)

“... I think that these skills are tried to be used more in our courses we make presentations such as ‘Drama in ELT’ and ‘Foreign Language Teaching to Children’ courses. Because we make presentations and we do it with many people, sometimes our groups consist of 7-8 people. So, we have to cooperate, and we have to come up with something creative, we have to come up with something different from what our friends do, and we have to integrate it into our lesson. That’s why I think it is used more in the courses where presentations are made.” (PTE6)

“I would like to talk about the courses we present rather than the ‘General Culture’ and ‘Vocational’ courses. I think we use these 21st century skills more in our field courses, especially when we present with a few people. Because we use our creativity and collaboration since we work together. ...” (PTE7)

“In non-field elective courses, our lecturers usually tell us to talk, convey our thoughts, and encourage us in this regard. But, as my friends say, it happens more in our field

courses because we always make presentations, and our lecturers want to see different things. For this, we need to think creatively.” (PTE8)

“From the moment I get this question, three courses came up to my mind. These are ‘Developing Course Content in ELT’, ‘Foreign Language Teaching to Children’, and ‘Evaluation of Classroom Learning’. Thanks to these courses, I think I have improved myself more, and I think my awareness has increased. We learned 21st century skills in detail in ‘Developing Course Content in English Teaching’ and then we put these skills into practice while making presentations. We had the opportunity to do internships in the ‘Foreign Language Teaching to Children’, so we used the information we have learned. We learned many things from classroom management to classroom activities in ‘Evaluation of Classroom Learning’. Our lecturer also talked about different cultures. That is why I think that these three lessons are given more effectively.” (PTE12)

“Drama in ELT’ was very good. That course solved all of our self-confidence and problem-solving problems. I would love to use drama if I have a good English class. Also, although the ‘Instructional Technologies and Material Design’ course was online, we learned a lot from our lecturer. The ‘World Englishes’ is also very effective for the use of technology. A lot of homework is given in this course, but somehow it is effective for us.” (PTE13)

“... I think ‘Drama in ELT’ was one of the most tiring courses of our education life in practice, but it was a course in which we used everything together, such as performing on stage, coming out into people, creativity, and cooperation. It was very tiring, but I think we will benefit it a lot in the future.” (PTE14)

“... Especially ‘Foreign Language Teaching to Children’, ‘Teaching Practice’, and ‘Critical and Analytical Thinking’ courses were very useful in this sense because they were courses where we could practice and interact with the student one-on-one.” (PTE16) ...

Courses within the scope of ‘Vocational Courses’ were the least emphasized sub-theme among other sub-themes by 8 replies. The opinions of PTEs reflecting this situation are given below:

“... We benefited ‘Morality and Ethics in Education’ course in terms of communication and critical thinking skills....” (PTE2)

“*Attention Deficit and Hyperactivity Disorder*’ course was a very productive course for me. Our lecturer was very good in that he did not want to make us worry about final grades, he wanted to give us information about the course and what we should do if we meet a student with this disorder. It was one of the best courses I have learned so far. It improved my ability to analyse and observe.” (PTE11)

“... ‘*Educational Sociology*’ and ‘*Educational Philosophy*’ courses were very productive. They were lectures on presentation and analytical thinking.” (PTE14)

4.3.8. Courses to be added to the ELT curriculum

Question 8 in the semi-structured interview was “*If there is a subject you would like to add to the curriculum of the ELT department within the framework of 21st century skills, what would it be? Why?*”. The sub-themes regarding PTEs’ responses are shown in Table 4.16. Some PTEs expressed opinions for more than one course.

Table 4.16. Sub-themes regarding PTEs’ responses on the courses to be added to the ELT curriculum.

Sub-themes	Basis	Courses	f	%	
Life and Career Skills	Discussion based	Collaborative Speaking	1	5	
		Comprehensive Speaking	1	5	
		Presentation Skills	1	5	
		Debate Classes	1	5	
	Skill-based	Music	1	5	
		Sport	1	5	
		Script Writing and Acting	1	5	
	-	Culture	1	5	
	Learning and Innovation Skills	Critical Thinking Skills based	Critical Art	1	5
			Critical Reading, Thinking and Interpretation	1	5
-		Critical Reading and Viewing	1	5	
-		Turkish Education System	1	5	
ELT based		Problems Faced by Teacher Candidates	1	5	
		Turkiye and General Problems in ELT	1	5	
		Test Solving Techniques in ELT	1	5	
		21st Century Skills in Teaching English	1	5	
		Curriculum Design	1	5	
		Foreign Language Teaching to Immigrants and Refugees	2	10	
Information, Media, and Technology Skills	21st Century Skills based	Foreign Language Teaching to Adults	5	25	
		Robotic Coding and Programming	1	5	
		Podcast	1	5	
		Scientific Methods of Acquiring Knowledge	1	5	
		Digital Literacy	1	5	
		Media Literacy	1	5	
		Foreign Language Teaching with Web 2.0 Tools	1	5	
Total		25	20	100	

PTEs would like to add 25 subjects/courses to the curriculum of the ELT department within the framework of 21st century skills. Courses to be added to the curriculum within the scope of *'Life and Career Skills'* were emphasized by 8 replies. The opinions of PTEs reflecting this situation are given below:

"Art courses can be added to the curriculum. When I look at my own school, I see teachers who are very poorly trained in art. Art is aesthetic, and aesthetics develops and trains people in every aspect. Sometimes our minds need to stretch and rest. I do not accept that art should ever be seen as a leisure activity. 'Music' and 'Sports' courses should also be given as a compulsory course instead of elective courses." (PTE4)

"I believe that to learn a language, we need to know its culture, so I would like to add a comprehensive 'Culture' course to the curriculum according to the language learned. At the same time, I believe that a course that will enable us to speak the learned foreign language more confidently and help us to increase our self-esteem should be in the curriculum named 'Comprehensive Speaking.'" (PTE5)

"I would like to add a course on writing a script and playing it. Students could complete the subject given by the teacher and present it to their other friends in the form of a theatre play. So, they would have applied all their 21st century skills. Its name would be 'Script Writing and Acting'." (PTE8)

"I would like to add a 'Presentation Skills' course. ... It would be a course that includes both content development and technology literacy. It would also provide much more theoretical and practical knowledge on how to teach with adults and young adults." (PTE14)

Courses to be added to the curriculum within the scope of *'Learning and Innovation Skills'* were emphasized the most by 16 replies. The opinions of PTEs reflecting this situation are given below:

"A course can be added to the curriculum as '21st Century Skills in English Education', and Lots and Hots questions can be used in the content of this course. In this way, students may develop their thinking skills because they cannot acquire 21st century skills unless their thinking skills are developed." (PTE6)

"I would like to add 'Debate Classes'. This course is given abroad actually. They throw an idea, and one group says 'Yes.' while the other group says 'No.'. During the Covid

period, one of our lecturers organized an activity like this. It was like a lesson in debate.”
(PTE9)

“There is an immigration problem in our country, we cannot deny it. And at school, in classrooms, we come face-to-face with those children. We inevitably fall short of teaching lessons because those children neither speak Turkish nor English. They only have their own mother tongue, but we do not know their mother tongue. I think we need a lesson on this, too. It may be named ‘Foreign Language Teaching to Immigrants and Refugees’. ...” (PTE15)

“As teacher candidates, we face various problems from the moment we start our internship, and we need to have a constant dialogue with someone. And I am curious about their experience and how they can find a solution for the problem facing. For example, it would be nice if research was conducted on the problems that teacher candidates face most often, and if these were given as a lesson, ... it would be nice since we could learn without having to engage in dialogues.” (PTE19)

Courses to be added to the curriculum within the scope of ‘*Information, Media, and Technology Skills*’ were emphasized the least by 6 replies. The opinions of PTEs reflecting this situation are given below:

“I think we have great difficulty in obtaining correct information in the century we live in. Because in the past, people did not know how to access information due to the scarcity of information, but now we cannot reach the right information due to the excess of information. That’s why I would like to add a course named ‘Scientific Methods of Acquiring Knowledge’.” (PTE16)

“It would be ‘Digital Literacy’ because I think we must keep up with the technological developments required by the era we live in.” (PTE17)

“I would like to add ‘Media Literacy’ course regardless of the context of English Language Teaching because it is one of today’s problems. I think every individual should have this skill, regardless of age or profession.” (PTE18)

“In the ‘Instructional Technologies and Material Design’ course, our lecturer showed us a lot of digital tools. And we have experienced how to use them. However, I think it could be a course for that entirely because we covered all of them in one lesson, we said their names, and our lecturer made us watch videos about them, but we did not have the experience

of using them all. I think there may be a lesson for this, or this subject could be discussed in more detail in a lesson. I would name the course 'Foreign Language Teaching with Web 2.0 Tools'. I think web 2.0 tools are very useful because they are up-to-date, and students love them. I think we need to master these tools to make our lesson more efficient." (PTE20)

4.4. Findings on TTEs' Perceptions about their Awareness on 21st Century Skills

In the second part of the third main problem of the study, perceptions about TTEs' awareness on 21st century skills were examined through semi-structured interview questions. Content analysis of the data obtained through a semi-structured interview form consisting of open-ended questions was applied. The findings obtained as a result of the study were divided into two categories as themes and sub-themes for each group of participants. There are 9 main themes and 24 sub-themes for TTEs. The main themes are presented in Table 4.17.

Table 4.17. Main themes on TTEs' perceptions about their awareness on 21st century skills.

Participants	Theme Number	Theme Name
TTEs	T1	The significance of 21st century skills in ELT
	T2	The most effective 21st century skills in ELT
	T3	Self-awareness on 21st century skills
	T4	Personal development in 21st century skills
	T5	Courses they taught mainly in the department
	T6	Use of 21st century skills in courses
	T7	Self-criticism about integrating 21st century skills into courses
	T8	The significance of PTEs' awareness on 21st century skills
	T9	Efforts to increase PTEs' awareness of 21st century skills

4.4.1. The significance of 21st century skills in ELT

Question 1 in the semi-structured interview was *"How important do you think 21st century skills are in English Language Teaching?"*. The sub-themes regarding TTEs' responses are shown in Table 4.18.

Table 4.18. Sub-themes regarding TTEs' responses on the significance of 21st century skills in ELT.

	Sub-themes	N	%
Important		4	100
Total		4	100

There are 4 (100%) TTEs who participated in this study think that 21st century skills are *'Important'* in English Language Teaching. The opinions of TTEs reflecting this situation are given below:

“I think it is very important. The reason why I think it is very important is that situations such as pandemics, wars, and migrations, which are generally experienced around the world, cause both mobility and inactivity. I think both are troublesome. The first difficulty is that people migrate to different places, and they have to cope with different skills without getting over their grief. The second challenge is that, due to inactivity, people are not in true three-dimensional human relationships just because of digital communication tools. This hinders skills such as cooperation and critical thinking. ... We have been coming together with different cultures, for this, 21st century skills are very important. There can be commercial, educational, vocational learning, and the expected skills are not like rote learning in the past century. What we need is more dynamic and mobile. ...” (TTE1)

“English Language Teaching department covers both language education and teacher training. ... Today, very rapid changes are taking place. For example, a new technological tool is introduced every day. ... Literacy skills are very important. One of the most important concepts right now is digital literacy. Therefore, in general, our program should include the intersection of learning skills, literacy skills, and life skills, as it is part of real life. ... Apart from these, we cannot separate culture from any of them, and that is part of it. Therefore, when we consider all these, I think that 21st century skills are very important to raise individuals who have language literacy, pedagogical literacy, digital literacy, and cultural literacy, and who are also accustomed to lifelong learning.” (TTE2)

“21st century skills are defined as survival skills. Indeed, we have been experiencing constant changes in recent years, especially when we consider learning environments. ... 21st century skills have an important place in acquiring a variety of skills from our daily lives to our profession and from entrepreneurship skills to technology literacy skills. ... Personal skills are also important, but 21st century skills are already building some of them. In short, I think 21st century skills are very important.” (TTE3)

“I think they are really important.” (TTE4)

4.4.2. The most effective 21st century skills in ELT

Question 2 in the semi-structured interview was *“What do you think are the most effective skills here?”*. The sub-themes related to the replies of TTEs are shown in Table 4.19. Some TTEs expressed opinions for more than one skill.

Table 4.19. Sub-themes regarding TTEs' responses on the most effective 21st century skills in ELT.

	Sub-themes	f	%
4C Skills	Motivation	1	25
	Communication Skills	1	25
	Collaboration skills	1	25
	Critical Thinking Skills	3	75
	Creativity Skills	2	50
	Analysis and Synthesis Skills	2	50
	Life and Career Skills	2	25
	Learning and Innovation Skills	2	50
	Information, Media, and Technology Literacy (ICT) Skills	2	50
	Problem-solving Skills	2	50
	Risk-taking Skills	1	25
	Productivity Skills	1	25
	Total	4	100

The term '*Critical Thinking Skills*' was the most emphasized skill among 21st century skills by 3 replies while the terms '*Creativity Skills*', '*Analysis and Synthesis Skills*', '*Life and Career Skills*', '*Learning and Innovation Skills*', '*ICT Literacy Skills*', and '*Problem-solving Skills*' were replied the second by 2 replies for each, and the terms '*Motivation*', '*Communication Skills*', '*Collaboration Skills*', '*Risk-taking Skills*', and '*Productivity Skills*' were the least emphasized skills replied to by 1 replies. The opinions of TTEs reflecting this situation are given below:

“Depending on the environment, problem-solving, risk-taking, and productivity skills gain importance. We need to produce solutions according to the problem, we live by taking risks for the future, and we need to add a difference to the things produced. An accurate perception of what is produced also requires media literacy. I think that critical thinking encompasses all of these because it requires skills such as analyzing the given information.”
(TTE1)

“... Which is more important can vary depending on which course you attend, what your goals are, and many other factors. But I think that life and career skills come first because our aim in our department is to raise individuals who can speak and use English in the future, exhibit exemplary behaviour in their social life, and are at peace with society. That's why I put life skills first because that covers them all. I put learning skills in second place because the concept of teaching-learning is very important in the constructivist approach we use. ... I think that digital skills have become very important nowadays because our communication with the world has become easier, and we can learn about culture more easily....” (TTE2)

“Since I am an educator, and touch on the teaching dimension, I want to address learning skills. ... Critical thinking, creativity, and problem-solving skills are required, especially in the teaching phase. Communication is also very important. It is now very important to act collectively as well as individualization. Group work is one of the points we care about, especially in classrooms. Students should also develop their collaboration skills. ... If I had to choose one, I would say problem-solving. Because it is necessary to be able to produce different solutions from time management to the problem encountered in social life.” (TTE3)

“I think the biggest factor in language learning is primary motivation. To provide motivation, we need to know from which source and how we can obtain data. This brings along media and technology literacy. ... Besides, creative thinking and critical thinking are very important because students should be able to filter them after they reach the information. In other words, he should be able to ask questions such as whether that information is correct or not, if it is correct, in which aspects it is correct, in what ways the information can be used, and how it contributes to my learning. This leads us to critical thinking skills. ... Including analysis and synthesis skills, because it is necessary to analyse the information first, and then synthesize the analysed information and reach new information.” (TTE4)

4.4.3. Self-awareness on 21st century skills

Question 3 in the semi-structured interview was “Do you find yourself sufficient in terms of your individual awareness of 21st century skills?”. The sub-themes regarding TTEs’ responses are shown in Table 4.20.

Table 4.20. Sub-themes regarding TTEs’ responses on self-awareness on 21st century skills.

Sub-themes	N	%
Sufficient	2	50
Can be improved	2	50
Total	4	100

There are 2 (50%) TTEs who participated in this study find themselves ‘Sufficient’ in terms of their individual awareness of 21st century skills. The opinions of TTEs reflecting this situation are given below:

“... I know what these skills are, I have an awareness on them. Maybe we sometimes feel inadequate in the rapid development of educational tools, but we can solve it immediately

with problem-solving skills. Therefore, I am aware of it and I think that I am sufficient as much as I need it.” (TTE1)

“There are many articles on 21st Century skills. We know from these articles because we read them. I generally know what 21st century skills are. I find myself sufficient.” (TTE4)

There are 2 (50%) TTEs who participated in this study find themselves ‘*Can be improved*’ in terms of their individual awareness of 21st century skills. The opinions of TTEs reflecting this situation are given below:

“It is very interesting how much one knows oneself because it is very difficult to set a threshold here. ... I think that my individual awareness is increasing day by day, because it may be related to age. When I think about my own development, I think that this awareness also contributes to my 21st century skills, as I now start to respect people’s stories more. ... But if we think in general, I can say that I have pedagogical competence and technological competence in terms of the courses I teach.” (TTE2)

“I may not be proficient in each of the 21st century skills, but yes on the four 4C skills. ... And there is no end to saying ‘Yes, I am sufficient.’ If you are a lifelong learner, you never feel sufficient anyway. You constantly try to improve yourself, so I think the purpose of the 21st century is to raise this type of learner. In this sense, competence should not be a criterion. I think we always have areas for improvement. ...” (TTE3).

4.4.4. Personal development in 21st century skills

Question 4 in the semi-structured interview was “*How did/do you improve yourself?*”. The sub-themes regarding TTEs’ responses are shown in Table 4.21. Some TTEs expressed opinions for more than one sub-theme.

Table 4.21. Sub-themes regarding TTEs’ responses on personal development in 21st century skills.

Sub-themes	f	%
Vocational training - Conferences	4	100
Making use of technology in terms of theory and practice	3	75
Reading books and articles	4	100
Total	4	100

All (100%) TTEs who participated in this study improve/d themselves within the scope of both ‘*Vocational Training*’ and ‘*Reading books and articles*’, and 3 (75%) TTEs also

expressed that they improve/d themselves within the scope of *'Making use of technology in terms of theory and practice'*. The opinions of TTEs reflecting this situation are given below:

"... I think I have done most of the things described in the Common European Framework (CEFR) determined by the European Union since I was a student. In other words, I develop myself by participating in all kinds of vocational training and online platforms given to us through the educational channels offered to us as professional and individual development. I also improve myself by reading because my profession requires it. ..." (TTE1)

"... Being a comfortable user of a language that opens up to the world is a great advantage because in almost every development in the world the first sharing is English. ... Apart from that, I always try to follow the developments on YouTube and other social media networks. I attend conferences, I read articles and columns, and things about them catch my attention. I create a list for myself from Google Scholar or other academic sites. I am constantly receiving new notifications about the areas that interest me. I think they contributed a lot. ..." (TTE2)

"First of all, there is a plus of being an academician. We do not stop reading, we constantly think of ourselves as students. ... While I am doing my job, I am trying to learn from my colleagues, articles, books, vocational training, and I am researching. ... I strongly believe in 'Teaching is double learning.' We teach and learn at the same time. ..." (TTE3)

"Articles and scientific data are very important to us. ... Since the information is given in bulk and put into a classification, the articles help me a lot. I also attend conferences and symposiums. My focus is on being able to use the knowledge we have learned. So, my teaching style is generally based on this. This improves my teaching skills." (TTE4)

4.4.5. Courses they taught mainly in the department

Question 5 in the semi-structured interview was *"Which courses do you mainly teach in the department?"*. The sub-themes regarding TTEs' responses are shown in Table 4.22. Some TTEs expressed opinions for more than one sub-theme and more than one course.

Table 4.22. Sub-themes regarding TTEs' responses on the courses they taught mainly in the department.

Sub-themes	Courses	f	%
BA (Undergraduate Level)	Listening and Pronunciation	1	25
	Measurement and Evaluation	2	50
	Critical Reading and Writing	1	25
	Intercultural Communication	1	25
	World Englishes and Culture	1	25
	Drama in ELT	1	25
	Speaking Skills	1	25
	Language Acquisition	1	25
	Approaches in ELT	2	50
	Reading Skills	2	50
	Teaching English to Children	1	25
MA (Graduate Level)	Professional Development	1	25
	New Technologies in ELT	1	25
	Project Development in ELT	1	25
	Sociolinguistics	1	25
	Language Learning Strategies	1	25
BA & MA	Academic Writing	1	25
Total	18	4	100

There are 4 (100%) TTEs participated in this study teaching at 'Undergraduate Level', and 3 (75%) TTEs participated in this study teaching also at 'Graduate Level'. Besides, Courses given under the title of 'Undergraduate Level' were replied to the most by 14 replies; courses given under the title of 'Graduate Level' were replied to the second by 5 replies; and course given under the title of 'Undergraduate and Graduate Level' was replied to the least by only 1 reply. The opinions of TTEs reflecting this situation are given below:

"My mostly repeated courses are 'Academic Writing', 'Listening and Pronunciation', 'Professional Development', 'Critical Reading and Writing', 'Assessment and Evaluation', 'Intercultural Communication', 'World Englishes', and 'Drama in ELT'. I realized that I personally teach mostly the courses I like. For example, 'Academic Writing' is like that, I teach this course at both undergraduate and graduate levels, with slightly different content. 'Critical Reading and Writing' is one of the courses that I enjoy the most because its content is not limited. I also enjoy giving the 'Intercultural Communication' course. ... Now, I realized I have always tried to make a product out of these courses. Before giving my lectures, I collect multiple materials such as videos, books, and articles. Then, while developing the content of that course, determining its objectives, measurement tools, and activities to be done, I either produced a book chapter or an article or a small presentation to present at the congress at the end." (TTE1)

“The courses I teach mostly in the last 5-6 years are ‘Speaking Skills’, ‘Language Acquisition’, ‘Approaches in ELT’, ‘World Englishes and Culture’ at the undergraduate level; ‘New Technologies in Language Teaching’, and ‘Project Development in Language Teaching’ at the graduate level. In other words, I teach skills, pedagogy, and culture. Next semester, I will teach ‘Artificial Intelligence and Language Teaching’. This year I included it in my ‘New Technologies in Language Teaching’ course. Robot-assisted Language Learning and Artificial Intelligence-assisted Language Learning are also included in this course.” (TTE2)

“I teach ‘Reading Skills’, a first-year skill course. I also include critical reading exercises in this course. I specifically integrate high-level reading skills. I do not teach at the graduate level.” (TTE3)

“At the undergraduate level, I mainly teach ‘Teaching English to Children’ and ‘Reading Skills’. I do not do critical reading since we teach this course as different lecturers in the first semester and as different lecturers in the second semester. I usually give classical texts and do reading comprehension. I also taught ‘Approaches in ELT’ and ‘Measurement and Evaluation’ at the undergraduate level. In addition, I teach ‘Sociolinguistics’ and ‘Language Learning Strategies’ at the graduate level.” (TTE4)

4.4.6. Use of 21st century skills in courses

Question 6 in the semi-structured interview was *“How do you personally use 21st century skills in your courses?”*. The responses provided by the TTEs are below:

“... I am teaching on a task, a question, or a discussion topic, or the assignment my students must prepare requires using one of the 21st century skills. Therefore, I give information about it first. ... I use these skills by giving examples from other countries as if we did not experience similar situations here. I use these skills indirectly with questions such as, ‘There is a society like this in North Korea... People in China are obsessed with...’. I feel compelled to put in all my skills while preparing my lesson plans. In other words, ‘Students will be able to...’ all refer to creativity, risk-taking, problem-solving, and digital literacy. ...” (TTE1)

“Collaboration, communication, and creativity are very important in my classes because our department is not far from art and music. It is a performance-based field. ... Also, problem-solving is very important in my lessons. A teacher should always be ready for

unexpected situations which requires problem-solving skills. And critical thinking is also very important because critical thinking includes all of these. ... If a student makes technology do a given assignment, this is no longer among the objectives of the assignment. That is why I want my students to do assignments where they can use their creativity and think critically. I use movie trailers in my classrooms, and I want everyone to associate those movie trailers with their own life. This is how I personalize the conversation. So, I want them to compare what they see in the trailer with their own lives. That is why I always want them to do something about creativity. The era of 'Search on this subject' is over, everything can be found very easily now. For this, I try to teach students individual creativity, learning from each other, collaboration, and communication. ... Apart from that, I direct students to digital tools that they can use as much as possible, and I ask about their outputs. In addition, I try to create cultural awareness in the assignments and lessons. I attach great importance to group work and learning from each other. I encourage them to think actively and creatively. I give them the opportunity to come up with new ideas. ...” (TTE2)

“The first step of reading and writing is to think and make the person think. First of all, I try to make students think and guess through brainstorming or concept mapping methods: 'Look at the title, look at the pictures, what kind of subject is waiting for us, make ideas about the subject, make predictions, deduce the meanings of the words'. In fact, these are all sub-skills of multiple thinking, critical reading, and estimation. That is why I am trying to address these points. In addition, rather than ordinary knowledge, understanding, and comprehension questions, I try to use the question method, Socratic Questioning- Socratic Thinking, which aims to make students question the reason and find the source of the information. ... Apart from these, we do reading and speaking activities to get the students' views, to discuss and refute each other's views. I never ask traditional, knowledge-level questions in exams either. Instead, I am trying to ask higher order level questions in Bloom's taxonomy.” (TTE3)

“At first, I explain and show the subject myself, then I make them watch the videos we used in previous years. In addition, there are videos on YouTube that I use constantly, I show them, and I try to explain through them.” (TTE4)

4.4.7. Self-criticism about integrating 21st century skills into courses

Question 7 in the semi-structured interview was “*How do you see yourself integrating 21st century skills into language teaching?*”. The sub-themes regarding TTEs’ responses are shown in Table 4.23.

Table 4.23. Sub-themes regarding TTEs’ responses on their self-criticism about integrating 21st century skills into courses.

Sub-themes	N	%
Sufficient	3	75
Need to improve	1	25
Total	4	100

There are 3 (75%) TTEs participated in this study find themselves ‘*Sufficient*’ in integrating 21st century skills into courses. The opinions of TTEs reflecting this situation are given below:

“I am very good at integrating 21st century skills into my courses. I even like that our department allows this a lot. So, it is nice that it requires a lot of reading and performing (writing and speaking). To be honest, I really like working in a department that is suitable for all these skills. ...” (TTE1)

“I can integrate all these skills in my language teaching. From culture to technology, from life skills to collaborative learning... Since what I do is based on the philosophy of it, I think they are integrated automatically. Anything I want to do should be integrated naturally. This may not be something that can be discovered directly but this is something that can be discovered over time. ...” (TTE2)

“One can feel sufficient when s/he has time for the lesson preparation, but when s/he has not enough time, s/he may incline towards more traditional methods in lessons. Integration is something that requires preparation, or one must have prior experience. There are presentations that I have prepared and used for different students before, I adapt them to the students’ levels and use them now. Maybe the reason why I feel more competent is the comfort of using the same materials for the second and third time.” (TTE3)

1 (25%) TTE who participated in this study finds himself ‘*Need to improve*’ in integrating 21st century skills into courses. The opinion of the TTE reflecting this situation is given below:

“Of course, I cannot say that I am one hundred percent competent. I need to improve myself at this point, but I think I have improved myself much so far.” (TTE4)

4.4.8. The significance of PTEs’ awareness on 21st century skills

Question 8 in the semi-structured interview was *“Do you give importance to your students’ awareness of 21st century skills?”*. All participants replied *‘Exactly, I give importance to my students’ awareness on 21st century skills.’*

4.4.9. Efforts to increase PTEs’ awareness of 21st century skills

Question 9 in the semi-structured interview was *“What kind of effort are you in (on a student basis) in this regard?”*. The responses provided by the TTEs are shown below:

“Online education has definitely helped us in this regard. In face-to-face education, I cannot offer much to the students outside of school because it also has an assessment-evaluation period. It brings challenges such as one-to-one and face-to-face reflection. But in online education, I create and use platforms for students through web tools. I can help students gain these skills by using more digital tools. I also diversify the interaction types in face-to-face education. In this way, students can establish three-dimensional relationships, and give reflection by talking about what they read. I give additional reading texts and videos and provide an environment for additional interaction types. ...” (TTE1)

“All the efforts I have mentioned are for this: students can learn from each other, share with each other, use technology effectively, create cultural awareness, be sensitive... One of the concepts I put at the top for this is ‘respect’. Let them be individuals who can understand different cultures and perspectives and act accordingly. I try to increase their awareness and prepare them for life with the materials I bring implicitly and explicitly.” (TTE2)

“First, I question whether I can act as a role model for them. Afterward, I care about them gaining these skills. For this, I sometimes do explicit teaching in the classroom. We now know that 21st century skills are vital, and students need to develop themselves. Therefore, I say, ‘These skills will touch your life in this way, they will be useful for you, be aware of this and do such kind of work.’ and I direct them to some resources on the internet. I also spend time in class for them to do these things. I use activities that include 21st century skills that I have prepared myself. In this way, I implicitly taught these skills to students. ...” (TTE3)

“I use activities that enable students to work together in the classroom, or I use sample videos that incorporate these skills. I give them a list of videos, I want them to watch, analyse and criticize the videos there. I want them to find out what is wrong and what is right. I get them to make empathy, I want them to put themselves in the shoes of the videographer and think about what they would do differently in that situation. Also, I give some sample information. I want them to develop something new by looking at that information. For example, I show my students sample activities done at the A1 level. They analyse these activities and take advantage of them to create new activities for different levels and different topics.” (TTE4)



CHAPTER 5

5. DISCUSSION

In this part of the study, research questions of the present study are discussed and answered in the light of the findings gathered.

5.1. Discussion

The research was carried out to reveal the 21st century skills awareness levels of the 3rd and 4th-grade PTEs and the TTEs currently working in the ELT department, and secondly to examine their perceptions about their awareness on 21st century skills. Here, the findings obtained are discussed and interpreted in light of similar studies on the research topic conducted before.

5.1.1. Discussion on the first research question of the study

The first research question of the study was “*Are the PTEs aware of 21st century skills?*”. The data related to the 21st century skills awareness levels of the PTEs studying in the 3rd and 4th-grades were obtained through the ‘21st Century Skills and Competences Scale’ with the voluntary participation of 167 PTEs, and then analysed by using the SPSS 26.0 package program. Since the scale does not have a specific manual, results were accepted as ‘high’ when the scores were above the median, and ‘low’ when the scores were below the median.

Considering the results obtained from the scale, it was observed that 79 (47.3%) PTEs had a high level of awareness on 21st century skills while 88 (52.7%) PTEs had a low level of awareness on 21st century skills (See Table 4.1.). The scores being so close, it can be said that PTEs participating in the study have a moderate level of awareness on 21st century skills. Similarly, Bedir (2019) revealed that the awareness levels of pre-service English teachers towards the 4Cs are moderate, and Baran-Lucarz & Klimas (2020) found in their research that most of the EFL teacher candidates do not have a clear understanding of what 21st century skills are. However, in the study of Irgatoğlu and Pakkan (2020), the awareness levels of ELL students on 21st century skills were found to be high. The fact that the students studying in English Language and Literature department read more books, make more book critiques, think critically about the themes handled in the books they read, and discuss them in their classrooms collaboratively during their undergraduate education may be the reasons that reveal the difference between them and the students studying in English Language Teaching

Department. In this regard, integrating such kinds of course contents and activities into the ELT curriculum might be helpful for PTEs to improve both their 21st century skills and awareness levels on 21st century skills.

Considering the gender variable, the mean of 21st century skills awareness levels of female PTEs was found to be 165.60, while the mean of 21st century skills awareness of male PTEs was found to be 166.65 (See Table 4.3.). Accordingly, it can be said that the mean scores of female and male PTEs gathered from the scale on their 21st century skills awareness are close to each other. As a result, it is seen that the awareness levels of PTEs towards 21st century skills do not differ in terms of gender ($t(165)=0.392$, $p > .05$). Similar to this study, when examining other studies on this topic, Gökbulut (2020) revealed that there is no significant difference between the gender of teacher candidates and their level of 21st century skills, and Gürültü et al. (2019) also revealed that there is no significant difference between the gender of secondary school teachers and their competence for 21st century skills use. These findings support the results of the current research. On the other hand, Bozkurt and Çakır (2016), Karakaş (2015), and Önür and Kozikoğlu (2019) revealed that there is a significant difference between the gender of the middle/secondary school students and their 21st century skills levels, and it is seen that female students have a higher level of 21st century skills than male students. Moreover, there are also studies that have determined that there are differences between some sub-dimensions of 21st century skills and gender. In the study conducted by Kan and Murat (2018) on science teacher candidates, significant results were found in favour of female science teacher candidates in the sub-dimensions of life and career skills, and ICT literacy skills in terms of gender variable. However, in the study conducted by Evin Gencil (2013), significant results were found in favour of male teacher candidates in terms of gender variable in the sub-dimension of technology proficiency. These findings suggest that roles and expectations change according to gender in some sub-dimensions of 21st century skills, therefore, it can be said that expectations might be an important factor in personal development.

Considering the grade level variable, the mean of 21st century skills awareness levels of 3rd-grade PTEs was found to be 161.78, while the mean of the 21st century skills awareness levels of 4th-grade PTEs was found to be 168.43 (See Table 4.5.). Accordingly, when the mean scores of the 3rd and 4th-grade PTEs on their 21st century skills awareness were examined, it was found that the mean scores of the 4th-grade PTEs were found to be

significantly higher. As a result, it is seen that the awareness levels of the PTEs on their 21st century skills differ significantly in terms of grade level. When the previous studies are examined, it is similarly seen that research study of Zeybek (2019), which she conducted on the use of 21st century learning skills of high school students, she concluded that the 21st century skills use level scores of 11th and 12th-grade students were higher than 9th and 10th-grade students. These findings suggest that as the duration of the program is completed, students' 21st century skills and 21st century skills awareness levels increase thanks to the course contents given in the program. That is, it can be said that the effectiveness of the program studied has been understood especially within the final years of it. Thus, the comment can be made that the fact that the 21st century skills awareness levels of PTEs studying in the 4th grade is higher than the 21st century skills awareness levels of PTEs studying in the 3rd grade indicates that 21st century skills awareness levels of PTEs studying in the 3rd-grade might increase as they complete the program that they are studying.

Considering the monthly income level variable, the mean of 21st century skills awareness levels of PTEs with a monthly income level of 0-999 ₺ was found to be 165.16, the mean of 21st century skills awareness levels of PTEs with a monthly income level of 1000-2999 ₺ was found to be 166.33, the mean of 21st century skills awareness levels of PTEs with a monthly income level of 3000-5999 ₺ was found to be 167.30, and the mean of 21st century skills awareness levels of PTEs with a monthly income level of over 6000 ₺ was found to be 167.44 (See Table 4.6.). Accordingly, it can be said that the mean scores of PTEs' 21st century skills awareness levels whose monthly income levels are 0-999, 1000-2999, 3000-5999, and over 6000 ₺ are all close to each other. The reason for investigating whether there is a significant difference between 21st century skills and the monthly income level of PTEs was to examine the effect of PTEs' possibility to access of technological tools and devices on their 21st century skills awareness levels. Before conducting the current study, it was thought that the monthly income level of PTEs might have a positive impact on their 21st century skills awareness levels and that 21st century skills awareness level of the PTEs might increase as their monthly income level increases. However, it is seen that 21st century skills awareness levels of PTEs do not differ in terms of their monthly income level. In other studies made on this subject, it is seen that no investigation was made in terms of participants' 21st century skills and monthly income level variables.

5.1.2. Discussion on the second research question of the study

The second research question of the study was “*Are the TTEs teaching in the ELT department aware of 21st century skills?*”. Data related to the problem of examining the 21st century skills awareness levels of the TTEs currently working in the ELT department of a state university were obtained through the ‘21st Century Skills and Competences Scale’ with the voluntary participation of 8 TTEs, all currently working in the ELT department, and then analysed by using the SPSS 26.0 package program. According to the findings of the research, it was observed that 3 (37,5%) TTEs had a high level of awareness of 21st century skills, 2 (25%) TTEs had the same score with median, and 3 (37,5%) TTEs had a low level of awareness of 21st century skills (See Table 4.7.). In other words, it can be said that TTEs who had a high level and low-level awareness of 21st century skills were equal in number while TTEs who had moderate level awareness of 21st century skills were equal to the median value of 186 with the least number of participants among all levels. It is accepted that TTEs have a moderate level of awareness on their 21st century skills since there is no much significant difference between the percentages of their scores. Reviewing the previous studies, it is seen that there is no similar study which has found similar findings with this study. However, Mehdaoui and Benabed (2022) revealed that EFL teachers are aware of the importance of 21st century skills thoroughly, and Tuzlukova et al., (2018) revealed that English teachers working at universities are aware of the importance of integrating critical thinking skills into their lessons. That is, it is possible to say that if TTEs have high levels of 21st century skills awareness, PTEs have high levels of 21st century skills awareness as well because both PTEs and TTEs have moderate levels of awareness according to the results of the present study. Therefore, it can be suggested that studies should be carried out to raise TTEs’ awareness of 21st century skills so that teachers can positively affect their students’ (PTEs) awareness of 21st century skills.

5.1.3. Discussion on the third research question of the study

The third research question of the study was “*What are the perceptions of the participants about their awareness on 21st century skills?*”. The data related to the problem of examining the perceptions of the participants about their awareness on 21st century skills were obtained through semi-structured interview questions prepared by the researcher. In this regard, interviews were conducted with purposefully selected 20 PTEs depending on their score levels, and randomly selected 4 TTEs teaching in the ELT department. And then, data obtained from this interview were analysed through content analysis.

Based on the findings of PTEs, regarding their responses on the significance of 21st century skills in ELT, it was concluded that all PTEs think that 21st century skills are important in English Language Teaching. Considering the results obtained from the 21st century skills awareness scale of the pre-service teachers used in this study, this result is thought-provoking. Results of the study showed that PTEs participating in the study have a moderate level of awareness on 21st century skills. However, in the interview conducted, participant PTEs stated that 21st century skills are very important in every human interaction, these skills are necessary not only in English Language Teaching but also in learning and teaching all languages, these skills are important especially for teacher candidates and teachers, teaching is more permanent and effective for students, that these skills should be adapted as quickly as possible in order to be a good teacher, 21st century skills and English Language Teaching are inseparable parts since these skills form the basic structure of the materials created in the English language. This might be explained as their having positive attitudes towards gaining 21st century skills.

Regarding PTEs' responses on the most effective 21st century skills in ELT, it is seen that PTEs think that the most effective 21st century skills are communication, cooperation, critical thinking, and creativity (4C), information, media and technology literacy (ICT), and entrepreneurship. Here, it is revealed that the most emphasized skill among these skills is communication (60%), and the least emphasized skill is entrepreneurship (5%) (See Table 4.10.). Regarding PTEs' responses on their self-awareness on 21st century skills, it is revealed that more than half (65%) of the interviewed PTEs find themselves sufficient in terms of their individual awareness of 21st century skills (See Table 4.11.), and it is seen that they improve their 21st century skills by using social exchange opportunities such as Erasmus+ student exchange program, using technology, making movie and book critiques, benefiting from the experiences of others, and attending some elective courses. This result does not coincide with the result obtained from the scale because most of the PTEs stated that they find themselves sufficient in terms of their 21st century skills awareness, however, they do not actually have enough level of awareness found by the questionnaire.

Regarding PTEs' responses on the effectiveness of curriculum courses, KPSS, and internship, it is revealed that more than half of the PTEs (70%) think that the curriculum courses, about half of them (45%) think that internships and very few of them (15%) think that preparing for KPSS contributes to their personal development (See Table 4.13.). More

specifically, regarding their responses on 21st century skills in course contents, the participant PTEs gathered around three different ideas about how effectively 21st century skills are taught in the course contents. It is revealed that 20% of the PTEs thought that 21st century skills are given definitely effective in the course contents, more than half (65%) of them thought that they are given partially effectively, and the others (15%) thought that they are definitely not taught effectively (See Table 4.14.). This might reveal the age variable in terms of efficiency of the courses given because this study revealed that PTEs improve themselves more in terms of 21st century skills in the courses that they make presentations given by younger TTEs, and they think that young TTEs use 21st century skills more in their course contents compared to older TTEs.

Regarding PTEs responses on the courses in which 21st century skills are taught more effectively, it is concluded that 21st century skills are taught more effectively in 26 different course contents given in the ELT department. According to the responses given by PTEs, the courses were handled in three different categories as ‘Non-field Elective Courses’, ‘Field Courses’, and ‘Vocational Courses’. In this categorization, it is seen that field courses were repeated more than the other courses; and ‘Foreign Language Teaching to Children’ (75%) and ‘Drama in English Language Teaching’ (65%) were the most frequently repeated courses, respectively (See Table 4.15.). The reason for this is that making many presentations in these courses pushes them to be creative, think critically, communicate effectively, and cooperate with their group mates. The responses given by the PTEs to this interview question confirmed the responses given by the PTEs to the previous interview question.

Finally, PTEs were asked about the courses they would like to add to the ELT curriculum within the framework of 21st century skills. According to the responses received, the courses that were asked to be added to the ELT curriculum were handled in three different groups according to the P21 framework as ‘Life and Career Skills’, ‘Learning and Innovation Skills’, and ‘Information, Media, and Technology Skills’. Accordingly, it is seen that the courses to be added to the ELT curriculum within the framework of the 21st century are mostly gathered under the title of ‘Learning and Innovation Skills’ while the courses that are asked to be added to the ELT curriculum within the framework of the 21st century skills are gathered under the title of ‘Information, Media, and Technology Skills’ the least (See Table 4.16.). The reason for these are that PTEs think that 21st century skills should be included more within the course contents and the names of the courses should be changed regarding

their contents, and TTEs use technology effectively in their course contents in the curriculum used, and accordingly, PTEs think that TTEs teach the use of technology in language teaching effectively. Therefore, PTEs did not find it necessary to add many courses under the 'Information, Media, and Technology Skills' heading.

Based on the findings of TTEs, regarding the significance of 21st century skills in ELT, it was concluded that all TTEs think that 21st century skills are important in English Language Teaching. Considering the results obtained from the 21st century skills awareness scale used in this study, this result is also thought-provoking since the results of the study showed that TTEs participating in the study have a moderate level of awareness on 21st century skills. Although they are moderate in level, they expressed the importance of 21st century skills since the situations like pandemics, wars, and migrations cause both mobility and inactivity which needs individuals to have these skills to adapt to the world they live in and the cultures they face, very rapid and continuous changes take place, and it is necessary to raise PTEs who have the skills of language literacy, pedagogical literacy, digital literacy, cultural literacy, and life-long learning.

The other side of the coin, from the TTEs' perspective, the most effective 21st century skills are examined, and it was seen that they think the most effective 21st century skills are communication, cooperation, critical thinking, and creativity (4C), motivation, analysis and synthesis, life and career, learning and innovation, information, media and technology literacy (ICT), problem-solving, risk-taking, and productivity. Here, it is revealed that the most emphasized skill among these skills is critical thinking (75%) (See Table 4.19.). It is also seen that half of the interviewed TTEs find themselves sufficient in terms of their individual awareness of 21st century skills while the other half think they need to improve themselves. This might be regarded positive because half of the TTEs think they are aware and the other half of TTEs still want to keep on improving. When their personal development in 21st century skills are examined, it is revealed that they keep improving their 21st century skills by attending vocational training programs and conferences, making use of technology in terms of theory and practice, and reading books and articles.

Regarding TTEs' responses on the courses they taught mainly in the department, it is revealed that participant TTEs mostly teach at the undergraduate level by 11 different courses including Listening and Pronunciation, Measurement and Evaluation, Critical Reading and Writing, Intercultural Communication, World Englishes and Culture, Drama in ELT,

Speaking Skills, Language Acquisition, Approaches in ELT, Reading Skills, and Teaching English to Children. It is also revealed that TTEs teach the courses given to them by the department, they do not choose courses, however, they mostly prefer to teach the courses that they specialize in, so they teach the same course for more than one year. And it is clearly seen that the courses in the ELT curriculum are geared towards 21st century skills, thus it contains many courses including 21st century skills as it is understood from the names of the courses. However, the fact that TTEs' awareness of 21st century skills is at a moderate level makes one think about how effectively 21st century skills are taught in the content of these courses. Therefore, it can be said that the awareness levels of the TTEs directly affect the awareness levels of the PTEs because in the quantitative results of the study, it was revealed that the 21st century skills awareness levels of both TTEs and PTEs were at a moderate level. Accordingly, it can be said that it is necessary to increase the 21st century skills awareness levels of TTEs with various in-service trainings and to encourage them to use 21st century skills more frequently in their lessons. This will also be beneficial for PTEs in this regard.

Regarding the responses of TTEs on their use of 21st century skills in their courses, it is revealed that all TTEs participating in the interview are in an effort to use 21st century skills in their courses. TTEs stated that they teach 21st century skills in their course content by using a task, a question or a discussion topic, give homework which requires students to use 21st century skills, teach performance-based lessons, want them to make presentations which require the use of creativity, collaboration, communication, critical thinking, and problem-solving skills, want them to compare the subject covered in the lesson with their own lives, encourage peer teaching and learning, ask them to think and guess with methods such as brainstorming and concept mapping, have them do activities for reading, speaking, and finding the source of information, and enable them to use digital tools and platforms by using them in a practical way in their lessons. Accordingly, when TTEs' self-criticism about integrating 21st century skills into language teaching is investigated, it is seen that more than half (75%) of the TTEs who participated in the interview considered themselves sufficient in terms of integrating 21st century skills into language teaching, while one of them (25%) stated that he had improved himself a lot so far, but still needs to improve (See Table 4.23.). This is a controversial issue because in this case, PTEs are expected to have a higher level of awareness on 21st century skills, not at a moderate level. That is, according to the results obtained from the study, it would be more appropriate for all TTEs to consider themselves in need of improvement.

In addition to these, it is seen that all TTEs give importance to their students' awareness of 21st century skills. In this regard, on a student basis, it is revealed that TTEs create platforms for PTEs through web tools and actively use these platforms in their lessons, provide additional reading texts and videos, enable them to talk about the reading texts given in cooperation, try to raise awareness about different cultures, try to be a role model for them, sometimes directly explain the importance of these skills in today's world, encourage them to do research from the reliable sources on the internet, ask them to analyse and criticize the videos they watch, enable them to empathize and want them to produce something new. The use of such kind of activities in each course content in the curriculum is highly beneficial in terms of improving PTEs' 21st century skills awareness. Therefore, it can be said that it is necessary to decrease the number of the courses which include theoretical knowledge where the teaching is teacher-centred, and increase the numbers of flexible courses based on performance which mostly include using of 21st century skills in the curriculum.

CHAPTER 6

6. CONCLUSION AND SUGGESTIONS

In this part of the study, conclusion and suggestions are presented.

6.1. Conclusion

The present study has shed light on the 21st century skills awareness levels of PTEs and TTEs, and contributed to the relevant literature. As a result of this study, first 21st century skills awareness levels of PTEs and TTEs were revealed by using a scale. And then, by considering the quantitative results, the perceptions of the participants about their awareness on 21st century skills were revealed by semi-structured interview questions. By providing quantitative data, the awareness levels of PTEs and TTEs were examined. With the qualitative part of the study, further and detailed data were collected and analysed to have deeper understanding of the case. This present study is of significant importance for the fact that it provides 21st century skills awareness levels of both PTEs and TTEs and also their insights. This is highlighting the case of 21st century skills in ELT context both from the prospective teachers and teacher trainers' perspective.

According to the quantitative results of the study, it was seen that the 21st century skills awareness levels of PTEs were at a moderate level. And, it was seen that 21st century skills awareness levels of PTEs did not differ in terms of gender and monthly income level while 21st century skills awareness levels of PTEs differed significantly in terms of grade level. Accordingly, it was revealed that 21st century skills awareness levels of the PTEs studying in the 4th-grade were higher than the PTEs studying in the 3rd-grade. Besides, it was seen that 21st century skills awareness levels of TTEs currently working in the ELT department were at a moderate level as well. In this case, it can be understood that there is a relationship between these two variables. That is, it can be said that 21st century skills awareness levels of TTEs might have implications on the 21st century skills awareness levels of PTEs either positively or negatively. Thus, it might be thought that increasing the awareness levels of TTEs may also increase the awareness levels of PTEs. It is of a great importance to carry out studies to increase 21st century skills awareness levels of TTEs and encourage them to use 21st century skills in their courses.

According to the qualitative results of the study, it was seen that PTEs think 21st century skills are important in English Language Teaching and the most effective skills here

are communication, cooperation, critical thinking, creativity (4C), information, media and technology literacy (ICT), and entrepreneurship. It is also revealed that most PTEs find themselves sufficient in terms of their individual 21st century skills awareness. In addition, it was seen that PTEs think curriculum courses contribute to their personal development on 21st century skills the most when they compare it with the contributions of internship and preparing for KPSS. However, more than half of them think that 21st century skills are given partly effectively in the course contents of the currently used curriculum. Moreover, it is concluded that 21st century skills are taught more effectively in 26 different course contents given in the ELT department, and field courses were emphasized the most among the others including non-field elective courses and vocational courses. It was stated that the courses in which 21st century skills are taught effectively were determined according to the TTE teaching the course rather than the course content, and younger TTEs use 21st century skills more frequently than other TTEs. Furthermore, it was seen that the courses that are asked to be added to the ELT curriculum within the framework of the 21st century are mostly gathered under the title of 'Learning and Innovation Skills'.

As a continuation of the qualitative results of the study, it was seen that TTEs think 21st century skills are important in English Language Teaching and the most effective skills here are communication, cooperation, critical thinking, and creativity (4C), motivation, analysis and synthesis, life and career, learning and innovation, information, media and technology literacy (ICT), problem-solving, risk-taking, and productivity. Besides, it was revealed TTEs are divided into two those who find themselves sufficient in terms of their individual 21st century skills awareness and those who need improvement on this topic. It was also seen that participant TTEs mostly teach at the undergraduate level, are in an effort to use 21st century skills in their courses, include various activities that need to use 21st century skills in their lessons, find themselves sufficient in terms of integrating 21st century skills into their language teaching, and give importance to their students' awareness of 21st century skills.

6.2. Suggestions

In this section, in the light of the results obtained from the findings of the research, suggestions for field experts and suggestions for further studies for researchers are presented.

6.2.1. Suggestions for field experts

This study focused on the 21st century skills awareness based on the perspectives of PTEs and TTEs. A further examination on the ELT curriculum might give insights on the relationship of the course contents and 21st century skills. Studies can be conducted on how 21st century skills are handled in the course contents, which skills are expected to be developed according to the results obtained, and which skills should be integrated into courses and education programs. More flexible planning of curriculum and course contents can enable teacher trainers to use 21st century skills more actively in their lessons. Thus, EFL teacher trainers are suggested to increase course practices that enable PTEs to demonstrate their language skills, create a collaborative environment, transfer their knowledge and skills into practice (such as micro-teaching), and provide opportunities to learn from their experiences and self-evaluation. In addition, information activities such as conferences on 21st century skills can be organized for teacher trainers, teachers, and prospective teachers by collaborating with various institutions, and in-service teacher training activities (online and face-to-face) can be planned by CoHE to increase the awareness of teacher trainers about 21st century skills and to support their integration of these skills into their lessons.

6.2.2. Suggestions for further studies for researchers

As a result of the study, the 21st century skills awareness levels of the 3rd and 4th-grade PTEs were found to be moderate. Considering the results are only limited to the participants of the study in a state university in Konya, more comprehensive studies can be carried out with more prospective teachers studying in different cities and different departments of other public and private universities in Türkiye. It was seen that 21st century skills awareness levels of PTEs did not show a significant difference in terms of gender. However, studies conducted by other researchers mostly revealed that female students have a higher level of 21st century skills than male students. Thus, it is suggested to investigate gender variable in more comprehensive studies including more participants. Besides, the 21st century skills awareness levels of the 4th-grade PTEs were found to be higher than the 3rd-grade PTEs. Based on the data, experimental studies can be carried out to improve the awareness levels of the lower grades about 21st century skills by investigating the reasons for it. In addition, no significant difference was found between the 21st century skills awareness levels of PTEs and their monthly income levels. Therefore, this variable may not be considered in future studies.

Moreover, due to the limitation of numbers, 21st century skills awareness levels of TTEs and the data related to their gender, age, degree, years of experience, and the number of courses given related to 21st century skills could not be analysed during the study. Therefore, a more comprehensive study can be conducted on this subject including only TTE participants. Another idea might be a more comprehensive study carried out on the same subject in different departments of the universities where the number of trainers is more.



GENİŞLETİLMİŞ TÜRKÇE ÖZET

Necmettin Erbakan Üniversitesi, Eğitim Bilimleri Enstitüsü
Yabancı Diller Eğitimi Anabilim Dalı
İngiliz Dili Eğitimi Bilim Dalı
Yüksek Lisans Tezi

21. YÜZYIL BECERİLERİ HAKKINDA FARKINDALIK BİR MADALYONUN İKİ YÜZÜ: İNGİLİZCE ÖĞRETMEN ADAYLARI VE İNGİLİZCE ÖĞRETMEN EĞİTİCİLERİ

Nida Nur IŞIK

21. yüzyıl, siyasi, ekonomik, sosyal, kültürel ve teknolojik değişimlerin hızla arttığı bir yüzyıldır. Bu alanlardaki hızlı ve sürekli artan değişimler, çağımız insanının yaşadığı bu çağa uyum sağlayabilmesi için bazı becerilere sahip olmasını gerekli kılmıştır. Herhangi bir konuda belirli bir düzeyde bilgi sahibi olmanın kabul edilebilir ve yeterli kabul edildiği bir önceki yüzyıldan farklı olarak 21. yüzyıl, hızlı değişim ve gelişmelere ayak uydurabilmek için insanların yeni beceriler edinmesini ve bu becerileri günlük yaşamlarında uygulamasını talep etmiştir. Dolayısıyla 21. yüzyılda ihtiyaç duyulan beceriler bir önceki yüzyılda gerekli olan becerilerden çok daha farklı olarak yalnızca beceri veya bilgiyi değil, performansın yanı sıra anlama ve yorumlamayı de içerir. Bu yüzden, 21. yüzyıl becerileri bireylerin hem iş hayatında hem de günlük yaşamda başarılı ve yetkin olmaları için gerekli olan bilgi, beceri ve okuryazarlığın birleşimi olarak tanımlanabilir. Dolayısıyla yaşadığımız bu yüzyılda, genel olarak hayata uyum sağlamak için tüm bireylerin '21. Yüzyıl Becerileri' adı verilen yeni yetkinlik ve becerilere sahip olması çok önemlidir. Bu becerileri hem yeni doğan çocuklara hem de okullarda eğitim almaya devam eden öğrencilere kazandırmak için ülkeler eğitim programlarını ve müfredatlarını yeni çağın ihtiyaçlarına cevap verecek şekilde güncellemektedir çünkü eğitim merkezi olarak nitelendirilen okulların bu becerileri kazandırabilmeleri için etkili bir eğitim verebilmeleri, çağa ayak uydurabilmeleri, yenilikleri, gelişmeleri ve değişimleri takip edebilmeleri ve en önemlisi öğrencilere rol model olabilmeleri gerekmektedir. Bu nedenle ülkeler, değişen dünyaya, ortaya çıkan yeni beceri alanlarına uyum sağlamak ve 21. yüzyıl becerileri ile donatılmış vatandaşlar yetiştirmek istiyorsa, becerilerini geliştirmiş ve öğrencilerini becerilerini kullanabilecek şekilde yetiştirebilecek eğitimcilere ve öğretmenlere ihtiyaç duymaktadır. Yani bu hedeflere ulaşmak için buradaki en büyük sorumluluk eğitimcilere düşmektedir.

Güncellenen eğitim programları arasında üniversitelerin öğretmen adayı yetiştiren eğitim fakülteleri bulunmaktadır. Ancak, öğretmen adaylarının ve üniversitelerdeki öğretmen eğitimcilerinin 21. yüzyıl becerilerinin farkındalık düzeyi henüz çok fazla bilinmemektedir. Bu bağlamda, üniversitelerin eğitim fakültelerinde 21. yüzyılın ihtiyaçlarına göre güncellenen eğitim programlarına göre eğitim veren öğretmeni eğitimcileri ve onlardan ders alan öğretmen adaylarının 21. yüzyıl becerileri konusunda farkındalık sahibi olması beklenebilir. Ancak, daha spesifik olarak, çalışmanın odak noktası İngiliz Dili Eğitimi olduğundan İngilizce öğretmeni eğitimcilerinin ve İngilizce öğretmeni adaylarının 21. yüzyıl becerileri konusundaki farkındalık düzeyleri henüz kapsamlı bir şekilde araştırılmadığı görülmüştür. Dolayısıyla bu çalışmanın, bu dönemde yükseköğretimde yeni öğretmen yetiştirmeye devam edecek olan İngilizce öğretmeni eğitimcilerinin ve onların yetiştirdikleri, geleceğin öğretmenleri olan İngilizce öğretmeni adaylarının 21. yüzyıl becerilerine ilişkin farkındalık düzeylerine ışık tutacağı düşünülmüştür. Bu amaç doğrultusunda, İngilizce öğretmen adayları ve İngilizce öğretmen eğitimcilerinin 21. yüzyıl becerilerine yönelik farkındalık düzeyleri ile katılımcıların 21. yüzyıl becerilerine yönelik farkındalıklarına ilişkin algıları incelenmiştir.

Çalışma karma desende yürütülmüş, Konya ilinde bulunan Necmettin Erbakan Üniversitesi İngilizce Öğretmenliği lisans programında 2022-2023 eğitim-öğretim yılında öğrenim gören 63 3. ve 104 4. sınıf olmak üzere toplam 167 İngilizce öğretmen adayıyla ve bölümde aktif bir şekilde ders veren tüm (8) İngilizce öğretmen eğitimcileri ile gerçekleştirilmiştir. Veri toplama aracı olarak araştırmanın nicel verilerini toplamak için önce *'Öğrenme ve Yenilenme Becerileri'*, *'Yaşam ve Kariyer Becerileri'* ve *'Bilgi, Medya ve Teknoloji Becerileri'* olmak üzere üç alt boyuttan oluşan *'Öğretmen Adaylarına Yönelik 21. yüzyıl Becerileri Yeterlilik Algıları Ölçeği'* kullanılmış; daha sonra ise nitel verileri toplamak için nicel verileri doğrulama amacıyla araştırmacı tarafından uzman görüşü alınarak hazırlanmış olan yarı-yapılandırılmış açık uçlu röportaj soruları kullanılmıştır. İngilizce öğretmen adaylarıyla yapılan röportaj için amaç doğrultusunda dört farklı odak grubu oluşturulmuş ve her bir grupta beşer kişi olmak üzere 20 İngilizce öğretmeni adayı ile toplu çevrimiçi görüşmeler yapılmıştır. İngilizce öğretmen eğitimcileri ile yapılan röportaj için ise rastgele 4 kişi seçilmiş ve görüşmeler bireysel olarak çevrimiçi yapılmıştır. Ölçek aracılığıyla toplanan nicel veriler SPSS 26.0 paket programı aracılığıyla analiz edilirken, yarı-yapılandırılmış açık uçlu röportaj soruları aracılığıyla toplanan nitel veriler içerik analizi yöntemi kullanılarak analiz edilmiştir.

Araştırmanın nicel sonuçları İngilizce öğretmen adaylarının 21. yüzyıl becerilerine yönelik farkındalık düzeylerinin ortalama düzeyde olduğunu, İngilizce öğretmen adaylarının 21. yüzyıl becerilerine yönelik farkındalık düzeyleri ile cinsiyet ve aylık gelir düzeyi değişkenleri arasında anlamlı bir fark olmadığını, fakat İngilizce öğretmen adaylarının 21. yüzyıl becerilerine yönelik farkındalık düzeyleri ile sınıf seviyeleri arasında anlamlı bir fark olduğunu ortaya koymuştur. Buna göre, 4. sınıfta okuyan İngilizce öğretmeni adaylarının 21. yüzyıl becerilerine yönelik farkındalık düzeyleri 3. sınıfta okuyan İngilizce öğretmeni adaylarının 21. yüzyıl becerilerine yönelik farkındalık düzeylerinden daha yüksek bulunmuştur. Ayrıca, İngilizce öğretmen eğitimcilerinin de 21. yüzyıl becerilerine yönelik farkındalık düzeylerinin orta düzeyde olduğu sonucuna ulaşılmıştır. Araştırmanın nitel sonuçları ise İngilizce öğretmeni adaylarının İngilizce Öğretiminde 21. yüzyıl becerilerinin önemli olduğunu düşündüklerini, burada en etkili becerilerin iletişim, işbirliği, eleştirel düşünme ve yaratıcılık (4C), bilgi, medya ve teknoloji okuryazarlığı (BİT) ve girişimcilik olduğunu düşündüklerini, bireysel farkındalıkları bakımından kendilerini yeterli bulduklarını, staj ve KPSS'ye hazırlanmayla karşılaştırdıklarında müfredat derslerinin 21. yüzyıl becerileri konusunda kişisel gelişimlerine daha fazla katkı sağladığını düşündüklerini, fakat çoğunun mevcut müfredattaki ders içeriklerinde 21. yüzyıl becerilerinin kısmen etkili bir şekilde verildiğini düşündüğünü, alan dışı seçmeli dersler ve mesleki derslerle karşılaştırıldığında 21. yüzyıl becerilerinin en çok alan derslerinde vurgulandığını, 21. yüzyıl çerçevesinde ELT müfredatına eklenmesini istedikleri derslerin çoğunlukla “Öğrenme ve Yenilik Becerileri” başlığı altında toplandığını ortaya koymuştur. Bunlara ek olarak araştırmanın nitel sonuçları İngilizce öğretmeni eğitimcilerinin İngilizce Öğretiminde 21. yüzyıl becerilerinin önemli olduğunu düşündüklerini, buradaki en etkili becerilerin iletişim, işbirliği, eleştirel düşünme ve yaratıcılık (4C), motivasyon, analiz ve sentez, yaşam ve kariyer, öğrenme ve yenilik, bilgi, medya ve teknoloji okuryazarlığı (BİT), problem çözme, risk alma ve üretkenlik olduğunu, 21. yüzyıl becerilerine yönelik bireysel farkındalıkları bakımından kendilerini yeterli bulanlar ve bu konuda geliştirilmesi gerekenler olarak ikiye ayrıldıklarını, daha çok lisans düzeyinde eğitim verdiklerini, 21. yüzyıl becerilerini derslerinde kullanma çabası içinde olduklarını, bunun için 21. yüzyıl becerilerini kullanmayı gerektiren çeşitli etkinliklere derslerinde yer verdiklerini, dil öğretimine 21. yüzyıl becerilerini entegre etme konusunda kendilerini yeterli gördüklerini ve öğrencilerinin 21. yüzyıl becerilerine yönelik farkındalık kazanmalarını önemsediklerini ortaya koymuştur.

REFERENCES

- Ahonen, A. K., & Kinnunen, P. (2014). How do students value the importance of twenty-first century skills? *Scandinavian Journal of Educational Research*, 59(4), 395–412.
- Ainley, J., Fraillon, J., Schulz, W., & Gebhardt, E. (2016). Conceptualizing and measuring computer and information literacy in cross-national contexts. *Applied Measurement in Education*, 29(4), 291–309.
- American Association of Colleges and Universities. (2007). *College learning for the new global century*.
- Anagün, Ş. S. (2018). Teachers' Perceptions about the Relationship between 21st Century Skills and Managing Constructivist Learning Environments. *International Journal of Instruction*, 11(4), 825–840.
- Anagün, Ş. S., Atalay, N., Kılıç, Z., & Yaşar, S. (2016). Öğretmen adaylarına yönelik 21. yüzyıl becerileri yeterlilik algıları ölçeğinin geliştirilmesi: Geçerlik ve güvenirlik çalışması. *Pamukkale University Journal of Education*, 40, 160–175.
- Aydın, A. (2019). *İngilizce öğretmen adaylarının görüşleri çerçevesinde öğretmen eğitiminde 21. yüzyıl becerilerinin incelenmesi*. Hacettepe Üniversitesi Eğitim Bilimleri Enstitüsü.
- Aydın, A., & Tan Şişman, G. (2021). Hizmet öncesi İngilizce öğretmen eğitiminde 21. yüzyıl becerileri. *Türk Eğitim Bilimleri Dergisi*, 19(2), 1223–1251.
- Aydın, S. (2021). *The relations between university students' 21st century skills, achievement oriented motivation and their motivation towards English*. Bartın University.
- Ayyıldız, B. (2019). *Sosyal Becerinin Önemi*. Özel İzmir Dost Psikoloji Aile Danışma Merkezi.
- Baran-Łucarz, M., & Klimas, A. (2020). Developing 21st century skills in a foreign language classroom: EFL student teachers' beliefs and self-awareness. *Academic Journal of Modern Philology*, 10, 23–38.
- Battelle for Kids. (2019). *Framework for 21st Century Learning*. <https://www.battelleforkids.org/networks/P21>.
- Bedir, H. (2019). Pre-service ELT teachers' beliefs and perceptions on 21st century learning and innovation skills (4Cs). *Journal of Language and Linguistic Studies*, 15(1), 231–246.
- Bozkurt, Ş. B., & Çakır, H. (2016). Ortaokul öğrencilerinin 21. yüzyıl öğrenme beceri düzeylerinin cinsiyet ve sınıf seviyesine göre incelenmesi. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 39(39), 69–82. <https://doi.org/10.9779/PUJE757>
- Cansoy, R. (2018). Uluslararası çerçevelere göre 21. yüzyıl becerileri ve eğitim sisteminde kazandırılması. *İnsan ve Toplum Bilimleri Araştırmaları Dergisi*, 7(4), 3112–3134.
- Çeçen, A. R. (2002). Duygular insan yaşamında neden vazgeçilmez ve önemlidir? *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 9(9), 164–170.

- Cemalođlu, N., Arslangilay, A. S., Üstündađ, M. T., & Bilasa, P. (2019). Meslek lisesi öđretmenlerinin 21. yüzyıl becerileri özyeterlik algıları. *Ahi Evran Üniversitesi Kırşehir Eğitim Fakültesi Dergisi*, 20(2), 845–874.
- Çevik, A., & Demirtaş, H. (2021). Okul müdürleri ve öđretmenlerin bakış açısıyla okul müdürlerinin 21. yüzyıl becerileri. *İnönü Üniversitesi Eğitim Fakültesi Dergisi*, 22(2), 1512–1543. <https://doi.org/10.17679/INUEFD.960126>
- Çiftçi, S., Yayla, A., & Sağlam, A. (2021). 21. yüzyıl becerileri bağlamında öđrenci, öđretmen ve eğitim ortamları. *RumeliDE Dil ve Edebiyat Araştırmaları Dergisi*, 24, 718–734.
- Çiğerci, F. M. (2020). Primary School Teacher Candidates and 21st Century Skills. *International Journal of Progressive Education*, 16(2).
- Creswell, J. W. (1999). Mixed-method research: Introduction and application. In *Handbook of educational policy* (pp. 455–472).
- Dede, C. (2010). Comparing frameworks for “21 st Century Skills.” *21st Century Skills: Rethinking How Students Learn*, 1–16.
- Dođu, K. (2022). *İlkokul yöneticilerinin teknolojik liderlik öz yeterlikleri ile 21. yüzyıl becerileri arasındaki ilişkinin incelenmesi*. Necmettin Erbakan Üniversitesi Eğitim Bilimleri Enstitüsü.
- Dokumacı Sütçü, N., & Sütçü, K. (2022). Examination of preservice teachers’ competence perceptions of 21st century skills by C&RT analysis. *Research Article. E-International Journal of Educational Research*, 13(2), 18–38.
- Eaton, S. E. (2010). *Global trends in language learning in the 21st century* (Onate Press). www.eatonintl.com
- Erdođan, V. (2019). Integrating 4C skills of 21st century into 4 language skills in EFL classes. *International Journal of Education and Research*, 7(11), 113–124.
- Erten, P. (2019). Öđretmen adaylarının 21. yüzyıl becerileri yeterlilik algıları ve bu becerilerin kazandırılmasına yönelik görüşleri. *Milli Eğitim Dergisi*, 49(227), 33–64.
- Evin-Gencel, İ. (2013). Öđretmen adaylarının yaşam boyu öğrenme yeterliklerine yönelik algıları. *Eğitim ve Bilim*, 38(170).
- Fandiño, Y. J. (2013). 21st Century Skills and the English Foreign Language Classroom: A Call for More Awareness in Colombia. *Gist Education and LEarninG REsEarch Journal*, 7, 190–208.
- Fatmawati, A. (2018). Students’ Perception Of 21 st Century Skills Development. *Pedagogy Journal of English Language Teaching*, 6(1), 37–46.
- Gafoor, K. A. (2012). Considerations in measurement of awareness. *Emerging Trends in Education*, 2.

- Geisinger, K. F. (2016). 21st century skills: What are they and how do we assess them? *Applied Measurement in Education*, 29(4), 245–249.
- Gelen, İ. (2017). P21-program ve öğretimde 21. yüzyıl beceri çerçeveleri (ABD uygulamaları)*. *Disiplinlerarası Eğitim Araştırmaları Dergisi*, 1(2), 15–29. www.p21.org
- Gelen, İ. (2020). *Öğretim ilke ve yöntemleri - Yapılandırmacılık*.
- Glimps, B. J., & Ford, T. (2008). Using internet technology tools to teach about global diversity. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 82(2), 91–95. <https://doi.org/10.3200/tchs.82.2.91-95>
- Gökbulut, B. (2020). Öğretmen adaylarının eğitim inançları ile 21. yüzyıl becerileri arasındaki ilişki. *Turkish Studies-Educational Sciences*, 15(1), 127–141. <https://doi.org/10.29228/turkishstudies.40164>
- Gürültü, E., Aslan, M., & Alcı, B. (2019). Ortaöğretim öğretmenlerinin 21. yüzyıl becerileri kullanım yeterlikleri - Competence for 21th century skills use of secondary school teachers. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi (H. U. Journal of Education)*, 34.
- Harari, Y. N. (2018). What Kids Need to Learn to Succeed in 2050. *Article Disponible Sur Internet*, 10. <https://forge.medium.com/yuval-noah-harari-21-lessons-21st-century-what-kids-need-to-learn-now-to-succeed-in-2050-1b72a3fb4bcf>
- Haviz, M., Maris, I. M., Adripen, Lufri, David, & Fudholi, A. (2020). Assessing pre-service teachers' perception on 21 st century skills in Indonesia. *Journal of Turkish Science Education*, 17(3), 351–363.
- Howells, K. (2018). *The future of education and skills: education 2030: the future we want*.
- Irgatoğlu, A., & Pakkan, G. (2020). The awareness of ELL students about their 21st century skills. *Journal of Language and Linguistic Studies*, 16(4), 1921–1938.
- ISTE. (2016). *ISTE STANDARDS: STUDENTS*. International Society For Technology In Education. <https://www.iste.org/standards/iste-standards-for-students>
- Kalemkuş, J. (2021). Investigation of science curriculum learning outcomes in terms of 21st century skills. *Anadolu Journal Of Educational Sciences International*, 11(1), 63–87. <https://doi.org/10.18039/ajesi.800552>
- Kan, A. Ü., & Murat, A. (2018). Fen bilgisi öğretmen adaylarının 21. yüzyıl becerileri yeterlik algıları ile Stem'e yönelik tutumlarının incelenmesi [Investigation of prospective science teachers' 21st century skill competence perceptions and attitudes toward STEM]. *International Online Journal of Educational Sciences*, 10(4), 251–272.
- Karakaş, M. M. (2015). *Ortaokul sekizinci sınıf öğrencilerinin fen bilimlerine yönelik 21. yüzyıl beceri düzeylerinin ölçülmesi*. Eskişehir Osmangazi Üniversitesi.

- Keleşoğlu, S., & Kalaycı, N. (2017). Dördüncü sanayi devriminin eşğinde yaratıcılık, inovasyon ve eğitim ilişkisi. *Yaratıcı Drama Dergisi*, 12(1), 69–86. <https://doi.org/10.21612/yader.2017.004>
- Koçak, Ö., & Göksu, İ. (2020). Examining 21st century skill levels of students and the relationship between skills. *Inonu University Journal of the Faculty of Education*, 21(2), 772–784.
- Kohlberg, L. (1984). *The psychology of moral development: The nature and validity of moral stages* (Vol. 2). Harper & Row.
- Lemke, C. (2002). enGauge 21st century skills: Digital literacies for a digital age. In *the North Central Regional Educational Laboratory and the Metiri Group*. www.ncrel.org/engauge
- Llego, M. A. (2022, September 14). *21st-century learning: What it is and why it's important*. TeacherPH. <https://www.teacherph.com/21st-century-learning/>
- Mehdaoui, A., & Benabed, A. (2022). Gauging Algerian EFL teachers' awareness of the 21st century compulsory skills: Case of EFL teachers at IbnKhalidoun University of Tiaret. *Technium Social Sciences Journal*, 33, 115–131. www.techniumscience.com
- Metcalfe, J., & Shimamura, A. P. (1994). *Metacognition: Knowing about Knowing* (MIT press.).
- Milli Eğitim Bakanlığı Talim ve Terbiye Kurulu Başkanlığı. (2017). *Müfredatta Yenileme ve Değişiklik Çalışmalarımız Üzerine...*
- Nacaroğlu, O. (2020). Examination of 21st century skills of gifted and average students. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi*, 53(2), 693–721. <https://doi.org/10.30964/auebfd.615067>
- NRC- National Research Council. (2011). *Assessing 21st century skills: Summary of a workshop*.
- OECD. (2005). *The definition and selection of key competencies -executive summary-*.
- Önür, Z., & Kozikoğlu, İ. (2019). Ortaokul öğrencilerinin 21. yüzyıl öğrenme becerileri. *Trakya Eğitim Dergisi*, 9(3), 627–648.
- Orhan-Göksün, D., & Kurt, A. A. (2017). Öğretmen adaylarının 21. yy. öğrenen becerileri kullanımları ve 21. yy. öğreten becerileri kullanımları arasındaki ilişki. *Eğitim ve Bilim*, 42(190), 107–130.
- Oxford Advanced Learner's Dictionaries*. (n.d.). 2023. Retrieved April 14, 2023, from <https://www.oxfordlearnersdictionaries.com/>
- Partnership for 21st Century Learning (P21). (2019). *P21 framework definitions*.
- Partnership for 21st Century Skills (P21). (2009). *Framework for 21st century learning*.

- Şahin, H., & Han, T. (2020). EFL teachers' attitude towards 21st century skills: a mixed-methods study. *The Reading Matrix: An International Online Journal*, 20(2).
- Sang, G., Liang, J.-C., Chai, C. S., Dong, Y., & Tsai, C. (2018). Teachers' actual and preferred perceptions of twenty-first century learning competencies: a Chinese perspective. *Asia Pacific Education Review*, 19, 307–317.
- Scardamalia, M., Bransford, J., Kozma, B., & Quellmalz, E. (2010). Draft White Paper 4 New assessments and environments for knowledge building. *Assessment and Teaching of 21st Century Skills*, 231–300. https://doi.org/10.1007/978-94-007-2324-5_5
- Seferoğlu, S. S. (2021). Bir 21. yüzyıl becerisi olarak kodlamının önemi ve eğitimdeki yeri. *Hürriyet Gazetesi Eğitim Haberleri Konuk Yazar Köşesi*.
- Senemoğlu, N. (2018). *Gelişim, Öğrenme ve Öğretim* (25th ed.). Anı Yayıncılık.
- Soland, J., Hamilton, L. S., & Stecher, B. M. (2013). *Measuring 21st century competencies guidance for educators*.
- Sun, Y. (2014). Major trends in the Global ELT Field: a non-native English-Speaking Professional's perspective. *Language Education in Asia*, 5(1), 7–19.
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics: Pearson new international edition* (6th ed., Vol. 28). Pearson Higher Education.
- Tarhan, N. (2023). *Sosyal ve Duygusal Gelişim Nedir?* Üsküdar Üniversitesi Sağlık, Kültür ve Spor Daire Başkanlığı.
- Tican, C., & Deniz, S. (2018). Pre-service teachers' opinions about the use of 21st century learner and 21st century teacher skills. *European Journal of Educational Research*, 8(1), 181–197.
- Trilling, B., & Fadel, C. (2009). *21st century skills: Learning for life in our times*.
- Tuzlukova, V., Al Busaidi, S., Burns, S., & Bugon, G. (2018). Exploring teachers' perceptions of 21st century skills in teaching and learning in English language classrooms in Oman's higher education institutions. *Journal of Teaching English for Specific and Academic Purposes*, 6(1), 191.
- UNESCO. (2018). *Digital skills critical for jobs and social inclusion*.
- Valipour, V., & Aidinlou, N. A. (2014). *The effect of language games on learning English listening-speaking skills of Iranian Pre-school students*. 4(2), 647–650. <http://www.cibtech.org/jls.htm>
- Wagner, T. (2010). *The global achievement gap: Why even our best schools don't teach the new survival skills our children need-and what we can do about it*.
- Yeni, G., & Can, T. (2022). The effect of 21st century skills training on foreign language teachers' perceptions regarding their educational technology and materials development competencies. *Bartın University Journal of Faculty of Education*, 11(1), 118–136.

Yıldırım, A., & Şimşek, H. (2016). *Sosyal Bilimlerde Nitel Araştırma Yöntemleri* (10th ed.). Seçkin Yayıncılık.

Zeybek, G. (2019). Lise öğrencilerinin 21. yüzyıl öğrenme becerileri kullanım düzeylerinin belirlenmesi. *International Journal of Social Sciences and Education Research*, 5(2), 142–156.



APPENDICES

APPENDIX-A: Ethics Committee approval



NECMETTİN ERBAKAN ÜNİVERSİTESİ
SOSYAL VE BEŞERİ BİLİMLER BİLİMSEL ARAŞTIRMALAR ETİK KURULU
BAŞKANLIĞI
ETİK KURUL KARARI

Etik Kurul Toplantı Tarihi/Sayısı ve Karar No	Tarih : 12/09/2022 Toplantı Sayısı:09 Karar No :2022/322
Araştırmanın Başlığı	21. Yüzyıl Becerileri Hakkında Farkındalık Bir Madalyonun İki Yüzü: İngilizce Öğretmen Adayları ve İngilizce Öğretmen Eğiticileri. Awareness on 21st Century Skills Two Sides of a Coin: Prospective Teachers of English and Teacher Trainers of English.
Sorumlu Araştırmacı	Dr. Öğr. Üyesi Emine Eda ERCAN DEMİREL
Yardımcı Araştırmacı	Lisansüstü Öğrenci Nida Nur IŞIK
Etik Kurul Kararı	11074 sayılı başvuru değerlendirilmiş olup, başvuru ile ilgili Etik Kurul tarafından “Uygun” kararı verilmiştir.

ASL GİBİDİR
12/09/2022

Dr. Öğr. Üyesi ~~Mustafa~~ AYDIN
Başkan Yardımcısı

APPENDIX-B: Permission of using “21st Century Skills and Competences Scale Directed at Teacher Candidates” (Anagün et al., 2016).

İzin



Nida Nur Işık

Alıcı: ssanagun

3 Tem 2022 Paz 15:15



Sayın hocam iyi günler,

Hem bir devlet okulunda aktif bir şekilde görev yapan öğretmen, hem de Necmettin Erbakan Üniversitesi Eğitim Bilimleri Enstitüsü Yabancı Diller Anabilim Dalı'nda ders dönemini tamamlamış bir yüksek lisans öğrencisiyim, ismim Nida Nur IŞIK. Bu dönem danışmanım Dr. Öğretim Üyesi E. Eda ERCAN-DEMİREL ile yazmayı planladığım ve literatür taramasını yaptığım 21. yüzyıl becerileri üzerine farkındalık konusunda siz değerli hocalarımın yazdığı, 2016 yılında Pamukkale Üniversitesi Eğitim Fakültesi Dergisi'nde yayımlanmış olan " Öğretmen Adaylarına Yönelik 21. Yüzyıl Becerileri Yeterlilik Algıları Ölçeğinin Geliştirilmesi: Geçerlik ve Güvenirlilik Çalışması" isimli çalışmanın ölçeğini siz değerli hocalarımın izni ile kendi tezimde anket olarak kullanmak istiyorum. Zamanınızı ayırdığınız için teşekkür ederim, dönüşünüz benim için oldukça değerli.

Saygılar,

Nida Nur IŞIK



Ölçek Gelen Kutusu x



Zeynep Kılıç

Alıcı: ben

4 Tem 2022 Pzt 11:46



Merhaba Hocam,

Dosya ektedir. Kolay gelsin, iyi çalışmalar hocam..

....

[İleti kısaltıldı] [Tüm iletiyi görüntüle](#)

Bir ek • Gmail tarafından tarandı



21. yüzyıl ölçeği s...

APPENDIX-C: “21st Century Skills and Competences Scale Directed at Teacher Candidates” (Anagün et al., 2016).

21. YÜZYIL BECERİLERİ ÖZYETERLİK ALGISI ÖLÇEĞİ		Her zaman	Sık sık	Bazen	Nadiren	Hiçbir zaman
Öğrenme ve Yenilenme Becerileri						
1	Karşılaştığım sorunların çözümüne yönelik özgün fikirler geliştiririm.	5	4	3	2	1
2	Yaşamımda özgün fikirler oluşturmak için farklı düşünme tekniklerimi (beyin fırtınası, altı şapkalı düşünme) kullanırım.	5	4	3	2	1
3	Bir problemi sonuca ulaştırmak için farklı çözüm yolları denerim.	5	4	3	2	1
4	Bütün- parça arasında alışılmışın dışında ilişkiler kurarım.	5	4	3	2	1
5	Problemlerin çözümü için hayal gücümü kullanırım.	5	4	3	2	1
6	Yeni fikirleri analiz ederek değerlendiririm.	5	4	3	2	1
7	Bir konuya ilişkin düşüncelerin farklı boyutlarını anlamaya çalışırım.	5	4	3	2	1
8	Problemi çözerken farklı bakış açıları belirlemek için sorular sorarım.	5	4	3	2	1
9	Problemlere çözüm üretmek için sabırlı bir biçimde çalışırım.	5	4	3	2	1
10	Bir iddiayı sorgulayarak görüşün dayandığı temel dayanakları araştırırım.	5	4	3	2	1
11	Karşılaştığım problemleri çözmek için akıl yürütme yollarını kullanırım	5	4	3	2	1
12	Problemlerin çözümünde bütün-parça arasındaki ilişkileri analiz ederim.	5	4	3	2	1
13	Farklı bakış açıları değerlendiririm.	5	4	3	2	1
14	Bilgi ve argümanlar arasında ilişkiler kurarak sentezlerim.	5	4	3	2	1
15	Sonuçlara bilgileri analiz ederek ulaşırm.	5	4	3	2	1
16	Edindiğim bilgiyi farklı yollarla (yazılı, sözlü gibi) diğerleriyle paylaşırm.	5	4	3	2	1
Yaşam ve Kariyer Becerileri						
17	Zamanı etkili kullanırım.	5	4	3	2	1
18	Yeteneklerimi geliştirmek için girişimde bulunurum.	5	4	3	2	1
19	Diğerlerinin bir konu üzerindeki düşüncelerini dinlerim.	5	4	3	2	1
20	Etkili iletişim becerilerine sahibim.	5	4	3	2	1
21	Grup çalışmalarında etkin bir biçimde çalışabilme becerisine sahibim.	5	4	3	2	1
22	Grup üyeleriyle uyumlu bir biçimde çalışırım.	5	4	3	2	1
23	Grup çalışmalarında sorumluluk üstlenirim.	5	4	3	2	1
24	Grup çalışmalarında bireysel katkılara değer veririm.	5	4	3	2	1
25	Başkalarının önerilerine dayalı olarak fikirlerimi değiştirme konusunda esneğimdir.	5	4	3	2	1
26	Yaşamımdaki farklı rollere (arkadaş, vatandaş, ekonomik, güç, aile üyesi) uyum sağlarım.	5	4	3	2	1
27	Yeni durumlara uyum sağlamada rahat değilimdir.	5	4	3	2	1
28	Eleştirilere açığım.	5	4	3	2	1

APPENDIX-C (Cont.): “21st Century Skills and Competences Scale Directed at Teacher Candidates” (Anagün et al., 2016).

29	Sorunlara çözüm üretmek için farklı bakış açılarını önemserim.	5	4	3	2	1
30	Öğrenmenin yaşam boyu devam eden bir süreç olduğunu bilirim.	5	4	3	2	1
31	Gelecekteki olayları tahmin etmek için geçmiş deneyimlerinden yararlanırım.	5	4	3	2	1
32	Ne zaman konuşup ne zaman dinlemem gerektiğini bilirim.	5	4	3	2	1
33	Başkalarıyla iletişimimde saygılıyım.	5	4	3	2	1
34	Farklı kültürlere saygı duyarım.	5	4	3	2	1
Bilgi, Medya ve Teknoloji Becerileri						
35	Diğerleriyle iletişim kurmak için medya ve teknolojiyi etkin kullanırım.	5	4	3	2	1
36	Medyadaki mesajların hangi amaçlara yönelik olarak yapılandırıldığını bilirim.	5	4	3	2	1
37	Medyanın bireylerin düşüncelerini yönlendirmede etkili olduğunu bilirim.	5	4	3	2	1
38	Bilgi edinmede uygun medya araçlarını kullanırım.	5	4	3	2	1
39	Farklı medya araçlarını kullanırım.	5	4	3	2	1
40	Bilgiye ulaşmada teknolojik araçları kullanırım.	5	4	3	2	1
41	Bilgiyi analiz ederken teknolojik araçları kullanırım.	5	4	3	2	1
42	Bilgi paylaşımında sosyal ağları kullanırım.	5	4	3	2	1