

**REPUBLIC OF TÜRKİYE
ÇUKUROVA UNIVERSITY
INSTITUTE OF SOCIAL STUDIES
ENGLISH LANGUAGE TEACHING DEPARTMENT**

**PROSPECTIVE EFL TEACHERS' SELF-DIRECTION: A COMPARATIVE
STUDY ON DISTANCE AND FACE-TO-FACE LEARNERS**

Aleyna GÜRSOY

MASTER OF ARTS

ADANA / 2024

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Supervisor: Prof. Dr. Hasan BEDİR

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MASTER OF ARTS

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ÖZET

İNGİLİZCEYİ YABANCI DİL OLARAK ÖĞRETEN ÖĞRETMEN ADAYLARININ ÖZ-YÖNETİMİ: UZAKTAN VE YÜZ YÜZE ÖĞRENENLER ÜZERİNE KARŞILAŞTIRMALI BİR ÇALIŞMA

Aleyna GÜRSOY

Yüksek Lisans, İngiliz Dili Eğitimi Ana Bilim Dalı

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Ocak 2024, 97 sayfa

Teknolojideki ilerlemelerin etkisiyle dijital öğrenme ve öğretme uygulamalarının günlük hayata yaygın bir şekilde entegre edilmesi, eğitim metodolojilerini büyük ölçüde yeniden şekillendirmiştir. 21.yy'daki bu gelişmeler ve özellikle küresel çapta doğal afetlerin ve salgın hastalıkların arttığı son üç yılda, dijital uygulamaların eğitime uyarlanmasında artışa yol açmıştır. Sonuç olarak eğitimciler, araştırmacılar ve alan uzmanları odak noktalarını çevrimiçi öğrenme ve uzaktan eğitime kaydırmıştır. Uzaktan eğitimin geleneksel öğretim yöntemlerine entegre edilmesi, özellikle uygulamalı ve deneyimsel süreçlerin büyük önem taşıdığı öğretmen yetiştiren lisans programları başta olmak üzere birçok yükseköğretim kurumunu etkilemiştir. Bununla birlikte uzaktan eğitime geçiş, araştırmacıları öğrencilerin bu süreci yönetme kapasitelerini keşfetmeye yönlendirmiş ve temel becerilerini bu doğrultuda geliştirip geliştiremedikleri konusunu ortaya çıkarmıştır. Bu araştırma çerçevesinde yapılan yetişkin eğitime yönelik öz-yönetimli öğrenme becerileri çalışmalarının bireyde 21. yüzyıl becerilerinin geliştirilmesinde de etkili olduğu vurgulanmaktadır.

Sürekli mesleki gelişimi teşvik eden ve eğitimcileri gelişen pedagojik yöntemler, dilbilimsel ilerlemeler ve teknolojiler hakkında bilgilendiren dil öğretiminin dinamik doğası göz önünde bulundurulduğunda, öz-yönetimli öğrenme becerileri İngilizceyi yabancı dil olarak öğreten öğretmen adayları için de oldukça önemlidir. Bu nedenle mevcut araştırma, hem uzaktan eğitim hem de yüz yüze eğitim ortamlarında öğretmen adaylarının öz-yönetimli öğrenme becerilerini birlikte incelemeyi amaçlamıştır. Ayrıca araştırmacı, İngilizce öğretmeni eğitimi bağlamında öğrenme ortamlarının etkililiğine ilişkin katılımcıların bakış açılarını daha derinlemesine incelemeye çalışmıştır. Amaç

doğrultusunda bu tezde nicel veri toplama (Aşkın Tekkol & Demirel, 2018 tarafından geliştirilen Öz Yönelimli Öğrenme Becerileri Ölçeği) ve nitel veri toplama (çevrimiçi açık uçlu anket) yöntemlerini birleştiren açıklayıcı bir karma yöntem tasarımı kullanılmıştır. Nicel veri toplama süreci için uygun örnekleme yoluyla 175, nitel veri toplama süreci için ise gönüllü örnekleme yoluyla 17 öğretmen adayı 2022-2023 akademik yılı Bahar döneminde araştırmaya katılmıştır. Daha sonra, nicel veriler tek yönlü ANOVA ve bağımsız t-testleri kullanılarak analiz edilirken, nitel veriler MAXQDA nitel ve karma veri yazılımı kullanılarak tematik analize tabi tutulmuştur.

Bulgular, motivasyon alt boyutunun en yüksek düzeyde olduğu İngilizceyi yabancı dil olarak öğreten öğretmen adaylarının öz-yönetimli öğrenme becerileri için olumlu sonuçlar göstermiştir. Ayrıca, katılımcıların öz-yönetimli öğrenme becerileri, cinsiyet ve not ortalaması açısından anlamlı bir fark göstermezken uzaktan eğitim katılımcılarının öz yönetimli öğrenme becerilerinin yüz yüze eğitim katılımcılarına göre orta düzeyde anlamlı bir fark gösterdiği bulunmuştur. Bu bakımdan, teknolojik yeterlilik gerektiren uzaktan eğitimin taleplerinin katılımcıları yetkinlik kazanmaya motive ettiğini düşünülmektedir. Bir diğer yandan, öğretmen adaylarının çoğunluğunun, etkileşimli doğası nedeniyle yüz yüze öğrenme ortamlarına yönelik uzaktan eğitim ortamlarından daha olumlu algılara sahip olduğu bulunmuştur. Dolayısıyla bu araştırmanın, yüz yüze ve uzaktan eğitim ortamlarının entegrasyonu için bir temel sağlayarak ve özellikle acil durumlarda elverişli öğrenme ortamlarının oluşturulması ve sürdürülmesi için eğitimcilere, araştırmacılara ve müfredat tasarımcılarına ışık tutarak mevcut literatüre katkıda bulunacağı düşünülmektedir.

Anahtar Kelimeler: öz-yönetimli öğrenme, EFL, öğrenme ortamları, uzaktan eğitim, yüz yüze eğitim.

ABSTRACT**PROSPECTIVE EFL TEACHERS' SELF-DIRECTION: A COMPARATIVE
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The widespread integration of digital learning and teaching practices into daily lives, driven by the advancements in technology, has greatly reshaped educational methodologies. These advancements in the 21st century have led to an increase in the adaptation of digital implementations especially with the upsurges of global natural disasters and epidemics over the past three years. As a consequence, educators, researchers, and field experts have shifted their focus toward online learning and distance education. This integration of distance education into traditional teaching methods has particularly affected higher education institutions, especially teacher training undergraduate programs in which hands-on and experiential processes are of great importance. Consequently, the shift to distance education has prompted researchers to explore the learners' capacity to navigate this process. Therefore, the central debate revolves around whether learners can effectively direct their learning and develop essential skills in learning settings. Accordingly, numerous studies emphasize the essential role of self-directed learning skills for prospective English as a Foreign Language (PEFLT) teachers, considering the dynamic nature of language teaching which facilitates continuous professional development, keeping educators informed about evolving pedagogical methods, linguistic advancements, and technologies.

On that account, this research aimed to examine the self-directed learning skills (SDL) of prospective EFL teachers (PEFLT) in both distance and face-to-face learning settings as well as participants' GPA and gender. Furthermore, the researcher sought to gain a deeper understanding of participants' perspectives regarding the effectiveness of learning settings in the context of English language teacher training. In line with the purpose, this thesis employed an explanatory mixed method design, integrating

quantitative data collection (Self-Directed Learning Skills Scale developed by Aşkın Tekkol & Demirel, 2018) and qualitative data collection (online open-ended questionnaire). While a total of 175 participants, selected via convenience sampling, were included for the quantitative part of the study, 17 participants, selected via voluntary sampling, were included for the qualitative data collection processes during the Spring semester of the 2022-2023 academic year. Subsequently, quantitative data were analyzed using one-way ANOVA and independent t-tests whereas qualitative data were subjected to thematic analysis using the MAXQDA software.

The findings indicated positive results for SDL skills of PEFLT with the motivation sub-dimension showing the highest level. In addition, participants' SDL skills did not indicate significant difference in terms of gender and GPA, yet it was found that the SDL skills of distance learners showed moderate significant difference compared to F2F counterparts. In this regard, it is believed that the requirements of DE, which necessitate technological skills, encourage participants to acquire proficiency. Conversely, it was found that the majority of the PEFLT had more positive perceptions towards F2F learning settings than DE settings mainly due to the interactive nature. Thus, this research will contribute to the existing literature by providing a basis for the integration of F2F and DE settings and by shedding light on educators, researchers, field experts, and curriculum designers to create and maintain conducive learning settings, especially during times of emergency.

Keywords: self-directed learning, EFL, learning settings, distance education, face-to-face education.

ACKNOWLEDGEMENT

After a year of hard work and the completion of an almost one-hundred-page thesis, perhaps now, I am writing the chapter that excites and challenges me the most. Because this time, I feel like there are not enough words on Earth to express my gratitude to the people without whose support and touch on my life, this thesis would not have been possible. First and foremost, I owe my deepest gratitude to my supervisor Prof. Dr. Hasan BEDİR for always welcoming me with open arms and providing me with his endless knowledge, support, and patience. This thesis would not have been possible without him showing me the boundless extent of my capabilities. I would also like to express my gratitude to the examining committee of my thesis, Prof. Dr. Gülden İLİN and Asst. Prof. Dr. Duygu İŞPINAR AKÇAYOĞLU, for their invaluable feedback and expert opinions.

I am deeply grateful to Assoc. Prof. Dr. Cüneyt DEMİR and Asst. Prof. Dr. Deniz ELÇİN for their unwavering support throughout my academic journey and thesis writing. Their guidance has been a constant source of reassurance, providing me with crucial assistance whenever I faced challenges requiring their expertise.

I would particularly like to thank Fatma İrem OCAKTAN KURGAN and Gülcan OSOYDAN with whom I started this journey. Their meticulous comments, endless motivation, and belief in my abilities were some of the things that reminded me to keep going at every step of this thesis.

I would also like to extend my deepest gratitude to Res. Asst. Muhammed Kürşat ÖKSÜZOĞLU for all the information he patiently taught me by sparing his own time during the analysis process of this thesis. I owe a very important debt to my colleagues and my dear friends, Res. Asst. İrem ELÇİ ÖKSÜZOĞLU and Res. Asst. Hasibe OTAL. Without you and your endless support and guidance in every aspect of my life, I would not have been able to complete not only this thesis but also this year and a half, especially not in the strangest place where I thought our paths would cross.

This chapter would be incomplete without expressing my deepest thanks to my friend Kevser KILIÇ whom I took my first step for language studies. Apart from this current chapter, thank you for being a part of each chapter in my life since high school. In moments of doubt, you consistently illuminated my path and showed me how far I have come. I would also like to extend my sincere appreciation to my friend Mücahid KÖK. You have been my uplifting ally throughout this academic journey and I am so glad you are a part of it.

Undoubtedly, my deepest heartfelt appreciation goes to my amazing family, this endeavor would not have been possible without your constant support. My mother Necibe GÜRSOY and my father Ahmet GÜRSOY, I could not be grateful enough to you for your warm and supportive hand that I have felt on my back since the day I was born. Thank you for nurturing and guiding me towards becoming a successful and independent individual in this journey of life despite various difficulties. I am profoundly thankful for the unconditional support and encouragement of my brother Aytuğ GÜRSOY and my sister-in-law Hilal GÜRSOY. I could not thank you enough for always being there for me when I needed you and understanding what I was going through even though I was using my happy voice. In times of academic challenges, you have been my rock of stability.

Lastly, to my boyfriend, my best friend, and my pillar of strength Volkan KAYGIN, I do not think any words in the world can adequately express my gratitude for your support. Thank you for believing in me even when I doubted myself the most and for putting a smile on my face every time I felt inextricable for eight years. Regardless of the distances and hardships that life has presented, you constantly make me feel that I can overcome any challenge. Your enduring support has been a driving force for this thesis, and I am truly fortunate to have you by my side.

Aleyna GÜRSOY

Adana / 2024

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LIST OF ABBREVIATIONS

DE: Distance Education

EDE: Emergency Distance Education

EFL: English as a Foreign Language

F2F: Face-to-Face

PEFLT: Prospective EFL Teachers

SDL: Self-directed Learning



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CHAPTER I

INTRODUCTION

1.1. Introduction

This chapter will provide a general overview of the research by explaining the background of the study, the statement of the problem, the purpose of the study, research questions, the significance of the study, limitations, and operational definitions.

1.2. Background of the Study

The ever-changing condition of technology in the 21st-century brings about innovative practices around the world while requiring ceaseless pursuit for individuals. As a consequence of this outgrowth, the integration of technological practices into education has always been a major issue to improve the quality of learning. From that point of view, it is no surprise that language learning and teaching are considered one of the vital fields in this integration of technology, paving the way for far-reaching learning facilities.

In a sense, online instruction has been a part of language teaching for a significant amount of time, offering plenty of applications for the benefit of learners (Güler & Esen, 2021). However, recent global events (such as epidemics and natural catastrophes taking the lead with the highest sphere of influence) around the world occurring in a way that human power cannot prevent necessitates further competence and attention for individuals. Sudden extraordinary changes taking place as an emergent caution to keep the educational system intact as much as possible were critical; eventually giving rise to transformations in traditional learning settings. Within that period, tremendous attention to distance learning and online instruction had to be paid, leading researchers, curriculum designers, teachers, and educators to seek more productive applications, though it was taken as an emergency action. In this respect, Bakhov et al. (2021) define Emergency Distance Education (EDE) as a temporary transition of the educational process to an alternative mode of learning caused by crisis circumstances and add that “the main purpose is not to reproduce a sustainable educational ecosystem, but rather to provide temporary access to learning and learning support, which are easy to set up and make available during an emergency or crisis” (p.3).

As much as this novel pedagogical implication (EDE) started as a trial and error concept, considerable system modifications have been made within a restricted amount of time, eventually ending with the introduction of the Distance Education (DE) concept. According to the United States Distance Learning Association, as proposed in 1998, DE is “the structured learning that takes place without the physical presence of the instructor.” (Holden & Westfall, 2010, p.3). Eventually, the concepts of distance learning and online instruction became so prevalent that certain institutions and universities commenced offering DE alternatives.

The in-depth inquiry and effort for developing DE facilities direct researchers' attention to learners' self-direction and learners' development of selves. Thus, it was suggested in the studies of Rovai (2003) and Tinto (2017) that online non-traditional learners have extra requirements, also stated as learner needs, including self-esteem, self-efficacy, self-regulation, and self-direction. Among the learner needs, self-direction of which effects and development were seen explicitly has been the center of interest during DE and online instruction processes and post-method pedagogy. In this framework, self-directed learning (SDL) can be defined as “a strategy or a method in which learners are encouraged by themselves to take personal responsibility and collaborative control of the cognitive and contextual processes involved in creating and confirming meaningful learning outcomes (Garrison, 1997, p.18). That being the case, the contextualized exploration of SDL skills offers a crucial introduction to the present research, establishing the foundation for comprehending the complex aspects of learning processes, especially within various learning settings.

1. 3. Statement of the Problem

In the rapidly evolving landscape of education, the increasing prevalence of integrating different learning methods, techniques, and settings has become the focal point of academic discussions and studies. The shift away from traditional learning settings to remote learning opportunities has become a widely accepted alternative. Indeed, this change is particularly noteworthy in English Language Teaching field, where keeping up with the evolving trends is a necessity, accessibility, and flexibility are high, and utilization of technology is a must.

Online learning, virtual learning settings, and e-learning are frequently viewed as interchangeable concepts yet they all share the common feature of being forms of DE

learning settings (Plews, 2017). On the other hand, one of the core and earliest definitions of SDL skills is “a strategy or a method in which learners are encouraged by themselves to take personal responsibility and collaborative control of the cognitive and contextual processes involved in creating and conforming meaningful learning outcomes” (Garrison, 1997, p.18). In the previously mentioned instances of research on learning settings and SDL skills, numerous researchers have concentrated on the SDL skills of students and their impact on engagement with online instructions and web-based platforms (Garrison, 2003; Song & Hill, 2007; Carpenter, 2011; Rappel, 2017; Jaleel & Anuroofa, 2017).

Along with this growth in the association between SDL and DE learning settings, SDL skills are not exclusive to DE; they can develop in face-to-face (F2F) traditional learning settings as well. From this angle, the absence of a comparative study on the SDL skills of prospective EFL teachers (PEFLT) in F2F and DE learning settings becomes evident. Hence, in the absence of such a comparison, it becomes arduous to improve the curriculum, methods, and techniques used in training prospective teachers who should become lifelong learners in line with 21st-century skills. This gap in the previous studies poses a deficiency in terms of post-method pedagogical implications centered on the encouragement of language educators to be open to innovation, to critically evaluate teaching practices, and to be susceptible to the needs of their learners.

1.4. Purpose of the Study

Among a variety of undergraduate programs, teacher training ones are of great importance since they are the shapers of future and raisers of future teacher candidates. Furthermore, to achieve this learner-centered and eventually teacher-centered prolific learning setting for prospective teachers, the needs of learners should be favored. Subsequently, within the framework of 21st-century trends, a balance between current developments in pedagogy and technological practices should be kept.

The ultimate purpose of this research is to investigate the SDL skills of PEFLT as they begin their academic path in the department, with specific attention to the factors influenced by the mode of education (F2F and DE), GPA, and gender. Additionally, the research seeks to investigate the overall perceptions of participants regarding learning settings. The research aims to provide insightful perspectives into the factors influencing the SDL skills of PEFLT, thereby informing educational practices and policies.

1.5. Research Questions

This current research will address the following questions in line with the aims stated above:

- Q1: To what extent, if any, do prospective EFL teachers (PEFLT) demonstrate self-directed learning (SDL) skills in their learning processes?
- Q2: Are there any differences in the prospective EFL teachers' (PEFLT) self-directed learning (SDL) skills based on gender, learning setting, and GPA?
- Q3: What are the prospective EFL teachers' (PEFLT) perceptions of F2F and DE learning settings?
- Q4: How do the F2F and DE learning settings affect prospective EFL teachers' (PEFLT) self-directed learning (SDL) skills? If so, in what ways?

1.6. Significance of the Study

In contrast to traditional F2F learning settings, which are typically more structured and teacher-led, educational technologies may vary such as websites, online forums, mobile devices, and video conferences depending on whether it is synchronous or asynchronous, one ultimate fact is that the impact area and demands for it will be in the frame for a very long time. Stephen et al. (2020) note that “considering the highly independent essence of the online learning environment, self-directedness is indispensable to online learners’ success and persistence” (p.309). Under the circumstances of different learning settings, certain responsibilities and requirements fall on to the learners, with prospective teachers taking the lead in particular. The ability to fulfill individuals’ learning process and constant monitoring is of high importance as the prospective teachers will be the educators of the future generation and; hopefully the raisers of the future self-directed learners.

However, a gray field exists in the pedagogical applications and principles; do learners better develop their SDL skills via DE or F2F learning settings? To disambiguate and clarify the dilemma mostly experienced by PEFLT most of whom go through low self-esteem and anxiety as a consequence of the nature of learning and teaching English as a Foreign Language (EFL), this thesis bears significant importance since, to researcher’s knowledge, comparative research has not been found in the related literature. Additionally, with the help of this study, a solid substructure for integrating the benefits

of both F2F and DE learning settings might be set up as well as preparing educators, researchers, and curriculum designers for sustaining productive learning settings, especially in emergencies. Given that this study will compare the analyses of F2F and distance learners, namely in this case PEFLT, effective integration of both learning settings can be made leading to upturns in higher education.

1.7. Limitations

Despite the meaningful contribution of this research to the field of English Language Teaching, certain limitations are listed below which are thought to have a possibility of causing drawbacks:

1. This study was carried out based on the convenience and voluntary sampling method from 12 state universities in Türkiye with a total number of 175 for quantitative data collection and analysis, as well as 17 participants for qualitative data collection and analysis. Therefore, the findings of this study might not be suitable for generalization to a broader population.
2. This study adopted a cross-sectional design limiting the scope of investigation to a specific moment in time, thereby restricting the examination of SDL skills throughout the participants' teacher education program.
3. Although correlations and comparisons between variables can be identified between SDL skills and learning settings, GPA, and gender of the participants, the complexity and multifaceted nature of the factors affecting SDL skills might pose challenges to establish definitive causal relationships.

1.8. Operational Definitions

English as a Foreign Language (EFL): The process of acquiring and utilizing the English language by individuals whose native language is not English, within educational settings where English is not the primary medium of instruction.

Prospective EFL Teachers (PEFLT): Individuals in the process of undergoing formal training and education to become certified English as a Foreign Language teachers, but have not fulfilled the requirements for formal entry into the teaching profession.

21st-Century Skills: A set of skills required by the learners in order to adapt to the unique demands and conditions of the 21st century, which are characterized by its focus on

technology, digital work, and the broader interpretation and utilization of knowledge (Anagün, 2018).

Self-directed Learning (SDL): Individual's ability to control his/her learning plan/schedule and other learning-related factors (Smith, 1982).

Face-to-Face (F2F) Education: Learning through direct, in-person contact between learners and instructors in a traditional classroom setting.

Distance Education (DE): Formal education conducted within an institution, involving separate learning groups and the use of interactive telecommunications systems to connect learners, resources, and instructors (Schlosser & Simonson, 2002).

Emergency Distance Education (EDE): A distance education process carried out in times of crisis without thorough preparation (Demirbilek, 2023).

1.9. Chapter Summary

In this chapter, an overview of the research was provided including the study's background, problem statement, purpose statement, formulation of research questions, discussion of the study's significance, limitations, and operational definitions.

CHAPTER II

LITERATURE REVIEW

2.1. Introduction

This chapter will provide a comprehensive review of the relevant literature pertaining to the conducted research. This chapter is divided into three main sections: 21st-century skills, self-direction, and learning settings, from general to specific. Firstly, the general framework of 21st-century skills will be clarified with the integration of English as a Foreign Language (EFL) and self-directed learning (SDL) skills. Afterward, the notion of self-direction will be discussed thoroughly, with an emphasis on SDL models. Lastly, learning settings in education will be explained, including a comparison between face-to-face (F2F) and distance education (DE), with a specific focus on the Türkiye context.

2. 2. 21st-Century Skills Framework

In the constantly changing landscape of the 21st century, there is a growing need for a new set of skills, reshaping the paradigms of education and career achievement. This period is characterized by swift technological advancements, globalization, and complex social challenges that require individuals to possess a unique skill set to succeed in life. Thus, the significance of 21st-century skills has become a prominent topic in educational discussions, emphasizing a holistic approach to equip learners with the necessary skills to thrive in today's modern world.

2.2.1. 21st-Century Skills: An Overlapping Definition

The concept of 21st-century skills, which originated essentially in the United States in 2007 with a focus on aligning education with contemporary job requirements, has gained widespread recognition and comprehensive study due to its alignment with evolving global educational changes. The exploration of 21st-century skills includes the cultivation of adaptability in constantly changing work settings, the development of a global mindset, and the encouragement of critical thinking aiming to shape individuals to achieve personal success and make meaningful contributions to society and global resilience. Accordingly, numerous educational programs and curriculum development

initiatives have been designed and implemented to integrate these essential skills into the educational framework (The Partnership for 21st Century Skills, 2007). This integration requires not only a transformation in the materials being taught but also in the methods of teaching and the applied assessment techniques.

Although related literature on 21st-century skills lacks consensus on a singular and universally accepted definition, an overlapping definition might be the skills that require the integration of critical thinking, communication, collaboration, and creativity to navigate a rapidly changing world and contribute effectively to a globalized and technologically advanced society. Correspondingly, despite the variations in definition, Karataş and Zeybek (2020) claimed that they are all aimed at empowering students to discern and effectively apply knowledge in real-life situations, regardless of their definitions. On the other hand, Ledward and Hirata (2011) considered 21st-century skills as a blend of content knowledge, particular skills, proficiency, and literacies essential to success in both professional and personal life. This perspective indicates the fact that success in the modern era extends beyond mere academic or professional proficiency, and by including literacies, competence goes beyond traditional skills, perhaps including digital literacy, cultural literacy, and other forms of literacy necessary for navigating the modern world. Building on the dynamic nature of 21st-century skills presented by many scholars (Armstrong & Warlick, 2004; Trilling & Fadel, 2009; Nair, 2020), current developments led to the extension of these definitions, underscoring the term's capacity to embrace the dynamic skills essential for navigating technological, digital, and knowledge-dimensions for the 21st century (Anagün, 2018).

2.2.2. 21st-Century Skills as a Critical Value

In the literature, numerous researchers have placed emphasis on the importance of individuals possessing 21st-century skills (Kay, 2009; Teo et al., 2010), mainly due to its crucial role in enabling individuals to adapt to changes and challenges encountered in the modern world. For instance, the central role of 21st-century skills highlights the fundamental belief that individuals leaving educational institutions must possess a unique set of skills to make meaningful contributions in an increasingly globalized and competitive world (Tight, 2020). When considered from this aspect, Tight's (2020) perspective provides a broader interpretation, setting the core of 21st-century skills in the belief that individuals at various educational levels now not only succeed but also

contribute to societal and economic improvement.

Given the highlighted significance of 21st-century skills, it becomes vital to precisely describe the skill set integrated within this framework (see *Figure 1*). In the conceptual framework provided by the Partnership for 21st Century Skills (P21, 2008), three branches of skills were presented and explained by Geisinger (2016):

1. Life and career skills involve mostly intrapersonal skills: flexibility and adaptability, initiative and self-direction, productivity, and accountability, and leadership and responsibility.
2. Learning and innovation skills involve creativity, critical thinking and problem-solving, communication, and collaboration (4Cs).
3. Information, media, and technology skills involve informational literacy; media; and information, communication, and technology literacy. (p.247)



Figure 1. 21st-century skills framework (P21)

Source: (Battle for Kids, 2020; cited in Ültay et al. 2021)

All in all, this model formulated by P21 and explained by Geisinger (2016), offers a thorough structure for comprehending the multifaceted nature of 21st-century skills, emphasizing the incorporation of personal, social, and technological skills important for thriving in today's society. Accordingly, the curriculum must be adapted to incorporate these essential skills for teachers to effectively equip students for the future (Erdoğan, 2019).

2.2.3. EFL Education in the 21st Century

The dynamism of contemporary society emphasizes the necessity for students to develop a wide range of skills going beyond just language expertise. In this context, delving deeper into the connection between skills needed in the 21st century and English as a Foreign Language (EFL) learners presents an intriguing area of research. The competence of EFL learners in skills like critical thinking, communication, cooperation, and technological knowledge not only improves their language learning and teaching but also positions them as skilled contributors in an interconnected global society.

The greater part of the literature on EFL and 21st-century skills comes from the necessity of changes in pedagogical implications in response to linguistic changes on a global scale. It was suggested that it is indispensable to provide English language learners with tasks that integrate modern technological resources and communication methods, which can facilitate the enhancement of language skills, digital literacy, and 21st-century skills (Black, 2009). In a similar vein, Eaton (2010) established a cultural standpoint that modern EFL classrooms should shift their focus away from grammar, memorization, and rote learning. Instead, they should be viewed as settings for acquiring language skills and cultural understanding to connect with people worldwide. Advocating for a shift in EFL education, it might be said that incorporating modern technology and a cultural viewpoint corresponds to a more comprehensive educational outlook. Hence, the development of students' abilities in creativity, critical thinking, collaborative skills, media literacy, initiative, and self-directed learning, along with social and cross-cultural competencies, stands as a necessity for educational institutions, as emphasized by Fandiño (2013).

In EFL education, an expanding body of literature underlines the crucial interplay between 21st-century skills and experiences of both learners and teachers (Karkoulia, 2016; Tafazoli et al., 2018; Zhang et al., 2020). Accordingly, previous research reveals a discernible pattern stressing the positive relationship between 21st-century skills and the competence, flexibility, and overall success of both learners and educators. One of the most exemplified studies in the field focusing on pre-service teachers and 21st-century skills is the study of Urbani et al. (2017), who investigated the jointure between 21st-century skills training, teaching proficiency, and teacher education programs. The results revealed that the simultaneous integration of developing, assessing, and modeling 21st-century skills had the greatest effect on the teaching skills of prospective teachers. By the same token, Bedir (2019) expanded the discussion by focusing on the design and

implementation of a framework designed to integrate 21st-century learning and innovation skills, particularly 4Cs, into the pre-service English Language Teaching teacher education curriculum. The framework's development ensued from a thorough assessment of relevant research and an examination of data gathered during a 12-week teaching practicum. The findings of the process of development indicated positive causal relationships between the framework and the probability of achieving positive and significant outcomes.

Among the prominent pillars of studies in the field have been the studies of technology, digital literacy, and online implementations, which play an important role within the framework of 21st-century skills, as well as the integration of these implementations into contemporary pedagogies. Similar to Black (2009) and Eaton (2010), who emphasized the inclusion of modern technological developments and cultural understandings for English language learners, Ganayen and Zidan (2018) analyzed the multidimensional aspects of Technology Education and Cultural (TEC) diversity, along with students' learning styles in both synchronous and asynchronous modes, teacher training, and levels of ICT skills. By utilizing a descriptive quantitative methodology, the study identified a significant proficiency in ICT skills among TEC students, especially the ability to understand knowledge meaning, to achieve success in a variety of professional and personal spheres required by the 21st century. Within the scope of Türkiye, Şahin and Han (2020) probed the attitudes of EFL teachers toward 21st-century skills, mainly based on the professional developments of EFL teachers in implementing 21st-century competencies in the classrooms. According to the findings, a positive attitude toward 21st-century skills was noted among EFL teachers, as well as the willingness to incorporate technological tools into their classrooms.

To sum up, examining 21st-century skills within the context of EFL learners sheds light on an important study field, especially given its nature, which requires both following and keeping up with the latest developments. The literature highlights pedagogical shifts, arguing for holistic approaches in learning and teaching settings, incorporating current technologies and cultural viewpoints. These findings, taken together, demonstrate the dynamic interaction between 21st-century skills and EFL education, opening avenues for innovative language practices.

2.2.4. Exploring the Link: Self-directed Learning and 21st-Century Skills

As the world continues to become more digitally connected, students must demonstrate knowledge, utilize information effectively, and express ideas convincingly (Armstrong & Warlick, 2004). That is to say, the digital age calls for a comprehensive approach to education, encouraging students to navigate the large pool of available knowledge independently, thereby emphasizing the reciprocal relationship between SDL and the demands of an interconnected world. Inevitably, Dede (2007) maintained that “society’s educational systems must transform their objectives, curricula, pedagogies, and assessments to help all students attain the sophisticated outcomes requisite for a prosperous, attractive lifestyle based on effective contributions in work and citizenship” (p.3).

Students’ accessing massive knowledge on their own accentuates the importance of developing SDL skills and aligning education with the demands of society. This autonomy is critical in training students to make different contributions in the workplace and as citizens. In previous studies, there was a consensus on the positive relationship between SDL skills and 21st-century skills. Teo et al. (2010) believed that the developing environment of education in the 21st century, along with the striking advances in technology and information accessibility, mandates the initiative of students’ SDL. Recognizing the key role teachers play in fostering SDL skills, it is indispensable that teachers, as self-directed learners themselves, continually develop their professional knowledge and skills to keep pace with the kaleidoscopic and updated information landscape (Fox, 2011). In this regard, a recent study conducted by Karataş and Zeybek (2020) explored the relationship between SDL skills and 21st-century skills. Accordingly, findings indicated a significant and positive correlation between SDL skills and 21st-century skills. This connection highlights the interdependence and mutual support between SDL skills and the multifaceted skills necessary for meeting the demands of the 21st century.

All in all, as the world becomes more digitally connected, students need to demonstrate knowledge, utilize information effectively, and express ideas convincingly. In other words, the digital age calls for a comprehensive approach to education, encouraging students to navigate the large pool of available knowledge independently. That being the case, exploring the connection between EFL education and 21st-century skills is a current focus in contemporary research, emphasizing the importance of

integrating critical thinking, communication, collaboration, and technological know-how to improve language learning and empower EFL learners as contributors to a global society. On the other hand, when considering the skills required in the contemporary era, it is evident that SDL skills hold significant importance. As noted in the previous studies, a positive relationship exists between SDL skills and 21st-century skills, stressing the importance of educators continuously improving their expertise to adapt to the information landscape.

2.3. Self-directed Learning

It is surely beyond doubt that 21st-century skills are rooted in the autonomy of individuals, and accordingly, one of the main objectives of educational programs is to provide individuals with lifelong independence through fostering SDL. This development not only increases their agency but also equips individuals with the capacity for educational growth throughout their lives. However, the concept of autonomy, often intertwined with SDL, is a frequently confused term that necessitates clarification to build a more comprehensive understanding of the field. Fundamentally, autonomy entails having the freedom and authority to make independent decisions while assuming accountability for one's conduct. Therefore, it would be right to say autonomy serves as an umbrella term, including the diverse self-directed systems, particularly within educational settings. SDL, which provides learners with the ability to choose the what, why, how, and where of their learning journey, is a concept that emphasizes the relationship between autonomy, self-direction, and learning (Francis, 2017). Hence, it is of high importance to gain a complete understanding of the interplay between SDL skills and their role in fostering 21st-century skills, shedding light on the dynamic relationship between learner empowerment and skill development.

2.3.1. The Art and Science of Helping Adults Learn

Self-directed learning (SDL) is a methodology grounded in the principles of adult education, specifically focused on andragogy. In Knowles' definition, andragogy is "the art and science of helping adults learn" (1980, p.43). According to this theory, adults have distinct ways of learning and developing in comparison to children due to their individual life experiences, interests, and educational goals. Davenport and Davenport (1985) categorized andragogy as a "theory of adult education, theory of adult learning, theory of technology of adult learning, method of adult education, technique of adult education,

and a set of assumptions” (cited in Merriam, 2001, p.5). The related concepts of SDL and andragogy share a fundamental goal: to facilitate adult learners in assuming responsibility for their own educational endeavors.

2.3.1.1. SDL: A Conceptualization of Learning

SDL was initially put forward by Tough (1966) and has subsequently led to the introduction of numerous related terms, e.g., self-regulated learning, self-education, self-monitoring, and self-efficacy. However, what is known about SDL essentially originated within the works of Knowles, whose description of the notion was a “process in which individuals take the initiative, with or without the help of others, in diagnosing their needs, formulating goals, identifying human and material resources, choosing and implementing appropriate learning strategies, and evaluating learning outcomes” (1975, p.18). According to him, SDL should not be perceived as a fleeting trend in education; rather, it is an essential human skill that allows individuals to acquire knowledge autonomously (Knowles, 1975). Likewise, Smith (1982) elucidated SDL as the “individual’s ability to control his/her learning plan/schedule and other learning-related factors” (cited in Su & Duo, 2010, p.156). Lastly, within the framework of language learning, self-direction is characterized by a learner’s strategic and attitudinal attributes that allow him/her to make informed decisions related to his/her language learning tasks under the assumption that he/she will take on their own responsibility in a free and willing manner (Tudor, 1996). As learners themselves, prospective EFL teachers (PEFLT) should have SDL abilities that will enable them to create their own teaching approaches and assist their future students in becoming more self-directed language learners.

In these definitions, the common ground is that SDL is characterized by individuals taking responsibility for their own educational process, which involves recognizing personal needs and objectives, ascertaining available resources, selecting appropriate methods of learning, and assessing outcomes. This critical ability allows adults to acquire knowledge independently. What makes SDL distinctive is the fact that it is a learning approach that does not require conventional elements such as traditional classrooms, standardized tests, instructors, cohorts, and evaluations; however, this does not imply an avoidance of formal environments (Gharti, 2019). Since SDL is a branch of adult education that is seen as a key aspect of andragogy, Biggs (1999) emphasized that the ultimate objective of education, particularly at the university level, ought to be SDL.

Acquiring a comprehensive understanding of SDL necessitates researchers to initially comprehend the cornerstones of constructing the concept. Therefore, the literature on SDL elucidates several pivotal aspects that must be considered. For example, Mezirow (1985) highlighted the key to SDL as attaining a critical awareness of what has been accepted as given about one's learning process (p.17), meaning that to make optimal use of SDL, it is crucial to scrutinize and challenge the preconceptions individuals hold regarding their individual techniques of acquiring knowledge. Knowles (1975) considered SDL a fundamental aspect of ensuring the existence of both individuals and the human race. On the other hand, Khodabandehlou et al. (2012) described the key properties of the self-directed learner as "the learner who can take responsibility for learning, an ability to define one's own objectives, awareness of how to use language materials effectively, careful organization of the time for learning, and active development of learning strategies" (p.3). All in all, some of the essential features of SDL and SD learners can be put forward as critical awareness of the learning, taking ownership of the learning, effective use of learning strategies, the ability to define clear objectives pertaining to the learning process, and so on. Hence, it would be accurate to assert that SDL promotes the development of learners' self-motivation, self-consciousness, self-control, self-dependence, and proactivity in relation to their learning (Gharti, 2019, p.62).

Over the past few decades, many claims, perceptions, and correlations concerning SDL and SD learners have been made by scholars; subsequently, a whole picture consisting of a few pieces has started to emerge, enabling a deeper insight into the research field. The motive behind the demand for SDL was explained by Su and Duo (2010) with the statement that "since it is less likely for individuals to stay and learn in the education system all their lifetime, helping students to become lifelong self-directed learners who can motivate and monitor their own learning process after formal school education has become important for many educators and teachers" (p.154). The aspect stated by Su and Duo (2010) is particularly important since SDL tend to learn how to learn or embrace challenges by engaging in various SDL activities such as self-study, collaborative group work, library research, attending seminars and conferences, utilizing Information Communication Technology (ICT) and accessing mass media resources (Gharti, 2019). According to Hiemstra (1994), SDL is linked to various forms of individualized education, such as self-education, self-teaching, autonomous learning, autodidaxy, and open learning. These tasks and learning situations facilitate the enhancement of learners' metacognitive abilities and empower them to manage their

learning independently.

2.3.1.2. Identifying Relevant Features for SDL

Several dimensions of SDL have been identified by Long (1989), namely the sociological, pedagogical, and psychological dimensions (cited in Garrison, 1997). According to Long (1989), the discourse on SDL has predominantly concentrated on sociological aspects such as independent task management and pedagogical factors related to their implementation in educational settings. He expressed amazement regarding the ignorance towards cognitive dimensions since neither the sociological nor pedagogical variables can be disregarded altogether. Therefore, it should be acknowledged and addressed the psychological factors as an essential dimension in understanding SDL comprehensively (Long, 1989, p.3). It is clear that while the sociological and pedagogical dimensions of SDL have been extensively discussed in previous studies, it is crucial to acknowledge the importance of cognitive factors as well. Additionally, Leach (2000) provided a list of factors that are responsible for the implementation of and challenges to SDL strategies, including the context in which SDL is being implemented, the domain of knowledge and level of learning being pursued, socialization, motivation, available time, resources, and age.

Due to the fact that the SDL abilities of learners largely depend on the learners' stepping forward for themselves, fostering SDL abilities necessitates certain teaching and learning goals to adopt. Merriam (2001) noted the SDL goals should include fostering transformational learning, emancipatory learning, and social action, as well as developing the capacity of the learner to be self-directed. Leach (2000) highlighted several factors that play a role in the successful implementation and execution of SDL strategies. These include the context in which SDL strategies are applied, the level of knowledge in the relevant domain, the learner's socialization, confidence, motivation, available time and resources, and age. Thus, when devising and implementing SDL approaches, it is crucial to take into account these variables in order to guarantee their efficacy and accomplishment. Given the significance of contextual factors in effectively executing SDL methodologies, it was established in the literature that specific features inherent to SDL may be transferable across diverse educational settings. In other words, although SDL might be influenced by the specific context in which it occurs, certain characteristics of SDL have been identified as universal and applicable across multiple contexts (Candy, 1991; cited in Song & Hill, 2007).

Although SDL can be influenced by context, some universal characteristics have been recognized. One of these common factors is the responsibility of learners for their own learning processes, which is closely related to autonomy. Therefore, autonomy and SDL are closely interwoven and even are used for one another with common processes, strategies, and areas of implementation. It was reported by Okumuş Ceylan (2015) that becoming a proficient independent learner requires time, considerable effort, and guidance to gradually eliminate dependence on the teacher. Hence, SDL serves as a mechanism to reveal the capacity of an individual to be an autonomous learner (Song & Hill, 2007). In order to fully understand SDL, it is important to recognize and address a variety of perspectives. The goals of SDL should aim for transformational learning, emancipatory learning, and social action while developing learners' self-directed capacity.

2.3.2. SDL Learning Models

The profound extent of SDL research has paved the way for scholars to propose several models that have been proven to be useful in facilitating the understanding of SDL by analyzing learner control and process. There exist various models of SDL, yet certain ones possess greater impact in facilitating future investigations: The Four-Dimensional Model (Candy, 1991), the Personal Responsibility Model (Brockett & Hiemstra, 1991-2012), the Staged Self-Directed Learning Model (Grow, 1991), Three-Dimensional Model (Garrison, 1997), and A Conceptual Model for Understanding SDL in Online Learning Environments (Song & Hill, 2007), respectively.

2.3.2.1. Four-Dimensional Model

In Candy's (1991) book 'Self-Direction for Lifelong Learning: A Comprehensive Guide to Theory and Practice', he proposed one of the pioneering models for SDL with the conclusion that SDL, serving as a comprehensive concept, comprises four distinct aspects: personal autonomy, self-management, independent pursuit learning, and learner control of instruction. It was stated that self-direction in learning constitutes a distinct domain with a larger framework of student control (Candy, 1991; cited in Rosales, 2022). The presented model underscores the importance of learners taking initiative in pursuing opportunities for learning and accessing resources, while also acquiring the essential competencies needed to achieve success in SDL.

In the Four-Dimensional Model, personal autonomy, which is contextual, entails the freedom for students to make choices and accurately evaluate their own limitations as learners whereas self-management as the second pillar of the model, is the students' willingness and capability to manage their own learning. The third dimension of the model highlights the learner control of instruction, which denotes the structuring of instructional material in a formal educational environment as well as the degree of authority that learners are granted during their classroom-based learning journey. Lastly, independent pursuit of learning refers to the acquisition of knowledge and skills that occur beyond conventional educational settings (Candy, 1991; cited in Abraham et al., 2016). Within this frame, independent pursuit of learning is exclusively important since learning occurs in a social context, so the quality of help one can receive from others should serve as an important indicator (Candy, 1991).

Candy's model (1991) integrated four dimensions to enhance the comprehension and facilitation of SDL among learners and teachers. The framework emphasizes the significance of affording opportunities for learners to take responsibility for their own learning, discover their individualized learning preferences, and foster an innate motivation toward education.

2.3.2.2. Personal Responsibility Orientation (PRO) and Person-Process-Context (PPC) Models (1991-2012)

In Brockett and Hiemstra's (1991) Personal Responsibility Orientation Model (PRO), they asserted that individuals with a robust sense of personal accountability have a tendency to participate in SDL, and cultivating this characteristic can be effective in promoting autonomous learning. The oval shape of the model consisted of four dimensions: personal responsibility, SDL, learner self-direction, and self-direction in learning (see *Figure 2*). It was asserted that the oval surrounding of these elements signifies that self-direction in learning is not isolated; rather, it unfolds within a broader social framework shaping both the learner and the dynamics of teaching-learning processes (Brockett & Hiemstra, 2012). In the model, an emphasis was placed on SDL in relation to the distinction between the teaching-learning process and the characteristics of learners (Brockett & Hiemstra, 1991; cited in Brockett & Hiemstra, 2012). What made the model distinguishable back at that time was its emphasis on intrinsic motivation and self-efficacy in the SDL process, besides the importance of learners' seeking meaningful

learning experiences on their own initiative. On the other hand, another important aspect was Brockett and Hiemstra's (1991) discernment between self-direction as a personal learner characteristic and as an instructional transaction characteristic while incorporating the concept of personal responsibility as a guiding factor for both dimensions. According to them, there are two fundamental approaches to comprehending SDL: process and goal. In the former, SDL is perceived as a process whereby an individual undertakes the main responsibility for "planning, implementing, and evaluating the learning process" whereas in the latter, SDL is referred to as a goal aimed at promoting the ability of learners to take responsibility for their own learning (p.23-24).



Figure 2. Personal Responsibility Orientation (PRO) Model

Source: (Brockett & Hiemstra, 2012, p.156)

In 2012, the PRO model was updated by the same researchers considering the changing implementations in education and learner needs with more distinguished features and named PPC (Person-Process-Context) model. The most important characteristic of the PPC model was the incorporation of the three basic components of PRO: 'the person or learner, the teaching-learning transaction or process, and the social context (Brockett & Hiemstra, 2012, p.157). In addition to the existing branches from the PRO, the PPC model was constituted of three branches in general: the person, which includes the characteristics of the individual such as creativity, critical reflection, enthusiasm, life expectation, life satisfaction, motivation, etc.; the process, which involves the teaching-learning transaction, facilitation, learning skills, learning styles, planning, etc.; and lastly, the context which encompasses the environmental and sociopolitical climate such as culture, power, learner environment, finances, gender, etc. (p.158). However, within the scope of the updated model (PPC), a significant emphasis

on context, in particular, was placed that was not adequately addressed in the PRO model. Brockett and Hiemstra (2012) advocated that “the optimal situation for SDL to be most effective is when the person, process, and context are in balance” (p.159). In that way, such an optimally balanced situation may lead to enhanced engagement, motivation, and achievement for learners who are willing to take control of their own learning process.

2.3.2.3. Staged Self-Directed Learning Model (SSDL)

With the aim of growing more insight into the aspects of SDL, Grow (1991) formulated his Staged Self-Directed Learning Model (SSDL). In the SSDL model, certain assumptions were proposed by Grow (1991), such as: 1. The goal of the educational process is to produce self-directed, lifelong learners. 2. The ability to be self-directed is situational in that one may be self-directed in one subject and a dependent learner in another. 3. Self-direction can be learned, and it can be taught (p.5). The SSDL model mainly focuses on how teachers can empower students to take charge of their own learning while emphasizing the place that teacher facilitation holds in SDL. Correspondingly, good teaching does two things: firstly, it aligns with the student’s level of self-direction, and secondly, it enables them to advance toward more elevated levels of self-direction (Grow, 1991).

Grow (1991) discussed that “the teacher’s purpose is to match the learner’s stage of self-direction and prepare the learner to advance to higher stages” (p.6), and on the grounds of this, four stages of the SSDL model were introduced. Accordingly, the first stage is where the student is dependent while the teacher plays the role of authority and coach, followed by the second one where the student is interested and the teacher acts as a motivator and guide. The third stage is where the student is involved while the teacher is the facilitator, and lastly, in the fourth stage, the learner is self-directed and the teacher is a consultant as well as a delegator. It is clear that, through the stages, the more responsibility the learner takes on and gets involved in, the more he/she develops self-direction. Additionally, Grow’s (1991) investigation included an assessment of students with regard to their degree of self-direction while considering the proposed developmental stages above. Learners with low self-direction require guidance from an authoritative individual to provide them with clear instructions on what to do, how to do it, and when. As they progress through stage one, learners gain a moderate level of self-direction in which they are interested, and they react to methods of motivation. These

learners with a moderate level of self-direction in the second stage are mostly known as ‘good students’. In the third stage, learners of intermediate self-direction possess skills and knowledge while viewing themselves as active contributors to their academic pursuits. In the final stage, learners of high self-direction establish their own goals and standards with or without the assistance of teachers and pursue their goals while using experts, institutions, and other resources (p. 6-11). Overall, the SSDL model proved to be a valuable representation of teachers’ roles during the stages of SDL.

2.3.2.4. Three-Dimensional Model

Followed by the models of Candy (1991), Brockett & Hiemstra (1991), and Grow (1991), the Three-Dimensional Model was propounded by Garrison (1997) with the purpose of confirming meaningful and worthwhile learning outcomes. Garrison’s (1997) conceptual framework principally emphasizes the utilization of resources, the adaptation of learning strategies, and the motivation for acquiring knowledge. Therefore, the accomplishment of SDL has been attributed to the interaction between three dimensions: self-management, self-monitoring, and motivation. According to Garrison (1997), SDL refers to a method in which students are motivated to take on individual accountability and cooperative control over the cognitive (self-monitoring) and contextual (self-management) procedures involved in generating and validating significant and valuable learning outcomes (cited in Abd-El-Fattah, 2010; p.587).

By far, the most well-known aspect of Garrison’s model is the integration and coaction of the self-management (task control), self-monitoring (cognitive responsibility), and motivation (entering and task) dimensions, easing the way for effective SDL. In the model, self-management pertains to the management of task control issues. Garrison (1997) highlighted the focus of self-management, which concerns task control issues on “social and behavioral implementation of learning intentions” involving the implementation of educational objectives as well as overseeing resources and assistance required for effective learning. Likewise, in the model, self-monitoring was also described as an indicator of cognitive and metacognitive processes constituting the second dimension. Precisely, “it is monitoring the repertoire of learning strategies as well as an awareness of and an ability to think about our thinking” (p.24). The last dimension for a potent SDL is motivation, with its crucial role in the initiation and sustenance of effort towards acquiring knowledge and the achievement of cognitive goals. As stated by

Garrison (1997), “motivation reflects the perceived value and anticipated success of learning goals at the time learning is initiated and mediates between context (control) and cognition (responsibility) during the learning process” (p.26).

The Three-Dimensional Model maintained by Garrison (1997) overall argued that to achieve success in SDL, individuals must enhance all three dimensions. These include cognitive abilities to strategize and regulate their own learning process, emotional determination to uphold motivation levels and commitment towards the objective, along with practical actions that allow them to efficiently obtain and utilize resources.

2.3.2.5. Conceptual Model for Understanding SDL in Online Learning Environments

Song and Hill investigated the frameworks of SDL in 2007 by emphasizing that existing frames primarily center on procedural aspects and individual characteristics in interpersonal contexts; therefore, they indicated the gap in SDL models in terms of different learning contexts, especially considering the highly increasing nature of technology and the requirements of the area of concern. To focus more on the effect of environmental factors in SDL, Song and Hill (2007) came up with a third additional dimension –the learning context- as well as the existing ones; personal attributes and the learning process (p.30). Since online learning is conducive to SDL, it is imperative that students take a proactive approach by designing their own study schedule (Chizmar & Walbert, 1999), evaluating their level of understanding and assimilation of course materials (Shapley, 2000), and exercising sound judgment when assessing different facets of the learning experience (Petrides, 2002; cited in Song & Hill, 2007). On that account, the conceptual model for SDL in online learning environments was put forward by Song and Hill for the purpose of constructing a more comprehensive and up-to-date framework by incorporating personal attributes (resources, strategies, and motivation), processes (planning, monitoring, and evaluating), and contexts into the learning process (see *Figure 3*).

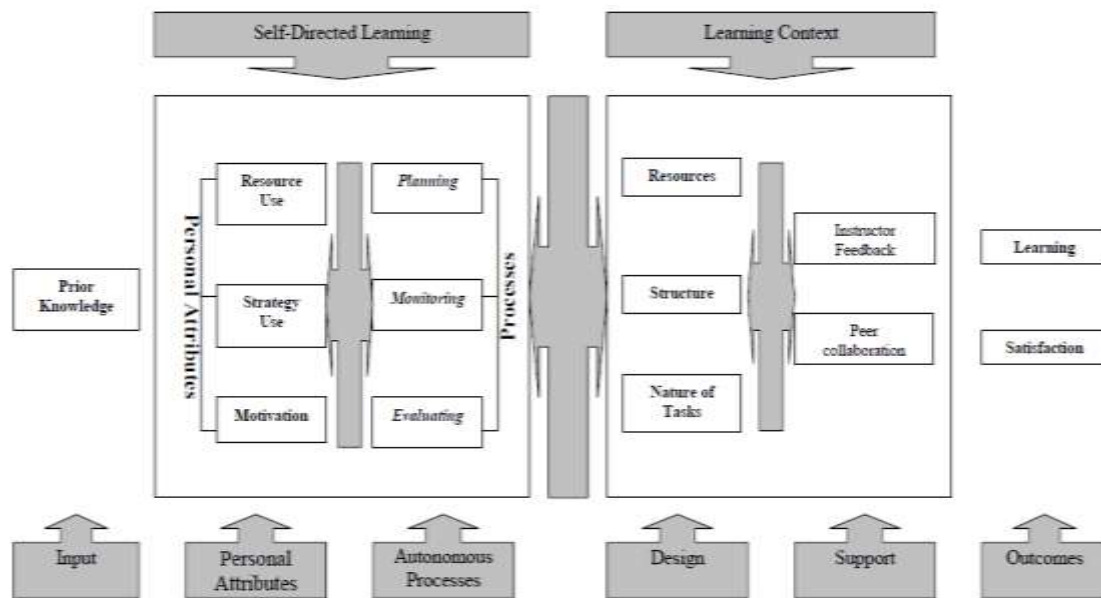


Figure 3. A Conceptual Model for Understanding SDL

Source: (Song & Hill, 2007, p.31).

Maintained factors were defined by researchers respectively: personal attributes are ‘the characteristics learners bring to a specific learning context, together with their prior knowledge of the content and prior experience with the learning context (p.32); processes are ‘learners’ autonomous learning processes; and lastly, the context which ‘focuses on environmental factors and how those factors impact the level of self-direction provided to the learner’. Integration of context into the SDL procedure was found specifically significant as there is no dominant mode of learning. Over and above that, the proposed framework designed particularly for different learning environments underscores the complex nature of decision-making and behavior, in which individual traits, processes, and contexts all hold a pivotal role in SDL behaviors and implementations. Undoubtedly, the various models put forth during the evolution of SDL have significantly advanced research efforts aimed at devising more refined and comprehensive learning settings.

2.4. Learning Settings

It only stands to reason that, in the kaleidoscopic nature of the world, it is inevitable for learners to keep pace with innovations. Therefore, the correlation between self-direction and learning environments is considerably robust. Moore et al. (2011) noted that “it is important to know how the learning environment is used and the influences of

the tools and techniques that distinguish the differences in learning outcomes as the technology evolves” (p.129). To put it another way, understanding how the learning environment is utilized and recognizing the effects of technological advancements on tools and techniques is crucial for discerning differences in learning outcomes. Although F2F-mediated learning environments have been established in education for many years, the advances in Information and Communication Technologies (ICT) reshaped teaching and learning settings (Taşçı, 2021), hence leading researchers to look for better and more effective strategies, implementations, and theories within the framework of education.

2.4.1. Distance Education: An Emerging Concept

F2F learning has been the cornerstone of education for centuries. Being able to have a teacher and fellow students in a physical classroom allows for an interactive and engaging learning environment, yet as the needs of the era individuals live in change, teaching and learning processes emerged to be conducted via different platforms. The drastic change in education as a result of ICT was also maintained by Pardede (2019) while highlighting the fact that the rapid progression and increased integration of advanced computer software and internet-based technologies within the realm of education, specifically in higher education, have caused significant transformations. On account of the mentioned blooming technology, the concept of “distance education” as an umbrella term (Keegaan,1996) has come into prominence, including sub-forms such as online learning, e-learning, technology-mediated learning, web-based learning, etc. (Conrad, 2006). Despite being interchangeably used with one another; DE is acknowledged to gather sub-branches belonging to the concept.

One of the most prominent definitions of DE was stated by Keegan (1980) by making use of these six components: 1. Separation of teacher and student; 2. Influence of an educational organization; 3. Use of technical media; 4. Two-way communication; 5. Possibility of occasional seminars; and lastly, 6. Participation in the most industrial form of education (p.33, cited in Johnston, 2020). Later, Zigerell (1984) identified DE as a “form of instruction characterized by the physical separation of the teacher from a student, except for the occasional F2F meeting allowed for by some projects” while differentiating between DE and distance learning (DL), wherein the former pertains to the methodology of delivering educational content from afar, while the latter emphasizes its reception by students (cited in Faibisoff & Willis, 1987, p.224). On the other hand, Demiray (2011)

defined online education, which is used with DE, as the delivery of educational resources and teaching to students through the utilization of Internet technology. Lastly, Gedik et al. (2013) described online education as a mode of learning that involves the delivery of courses partially or completely online with the option of synchronous or asynchronous participation. A joint endeavor to describe DE showed that it refers to efforts to facilitate access to learning for those who are geographically remote (e.g., Moore et al., 2011; Vovides & Lemus, 2018; Hernández-Gantes, 2011), whereas its popularity was considered to be influenced by advances in technology, changes in learners' characteristics, budgetary constraints, and increased demand for higher education (Banas & Emory, 1998, p.366).

The increasing acknowledgment and emphasis on DE, including distance learning in higher education, has led to a substantial transformation of the educational milieu and encounter. However, it is apparent that the nature of distance learning requires learners to take more control of their own learning; therefore, being independent learners to get the most out of their learning process. Data from several studies has focused on the skills and competencies that learners develop or precisely should develop, in distance learning environments. Garrison (2003) agreed and stated that “the asynchronous and virtual nature of online learning calls on learners to be self-directed and to take responsibility for their learning” (p.5). On the other hand, Murphy (2007) considered distance learners having control over aspects of their learning, such as time and pace whereas they do not have to take primary responsibility for setting goals and evaluating learning. She further continued and highlighted the importance of material use in distance learning since “they have to anticipate a range of potential language learning needs and care for students working in isolation without immediate access to teachers or peers” (p.74). Likewise, it is rather significant to note that for individuals who are learning a language, especially in remote settings, metacognition, including self-awareness and self-management skills, is the most crucial competency to possess.

All in all, it has been acknowledged that distance learning is growing in popularity and importance in higher education, but its growing incorporation and acceptance in academia have significantly changed the educational environment and experience for students and faculty (Banas & Emory, 1998); ultimately leading to the emergence of a number of studies to increase practices to improve the quality of DE and to compare F2F and distance learning environments.

2.4.1.1. The Dilemma: Face-To-Face or Distance Education?

Much of the research on learning environments has principally focused on the comparison between F2F and DE perceptions, the development of the skills as well as the advancements in learners' characteristics. Presently, it is thought that by delving deeper into the nuances of various learning environments and examining how they affect diverse populations, educational practices can be improved. As Sherry (1996) stated, student preference for a certain mode of learning is one of the most important variables since what may work for one type of learner may not work for another.

In the study of Price et al. (2007) in which they compared students' experiences of F2F and online learning in DE, the students preferred F2F education over online one within the scope of interaction between students and teachers, particularly. Ozudogru and Hismanoğlu investigated the perceptions of freshmen students on foreign language courses conducted in e-learning environments and found that students were not satisfied with e-learning settings and preferred F2F over e-learning (2016). Similarly, Xu and Jaggars (2011) assessed the efficacy of distance learning with regard to Math and English classes at the introductory level. Based on their findings, online courses proved to be less efficacious compared to F2F learning settings. A recent study conducted by Altıntaş et al. (2020) for the purpose of investigating pre-service perceptions on DE, in a similar vein, indicated that perceptions of pre-service teachers regarding DE were low and somewhat indecisive with gender differentiation. Accordingly, the findings of the study posed that female students are more in favor of F2F education compared to male students. Despite the abundance of research signifying the widespread preference for F2F learning in education, there are a large number of published studies revealing the non-difference state of distance and F2F education.

Zhao et al. (2005) analyzed the effectiveness of DE through meta-analysis and it was determined that there were no significant differences between distance and F2F education based on the overall collected data though significant differences across the studies were found, as well. Likewise, Reisetter, LaPointe, and Korcuska (2007) compared F2F and distance learners to investigate if they are satisfied with the quality of their learning. The results of the study showed that the learning outcomes and satisfaction levels have no significant difference depending on the learning styles. From a different point of view, Diaz and Entonado (2009) analyzed the difference between F2F and DE from the perspective of teachers considering their roles in learning settings and concluded

that there are no significant differences depending on the teaching modes.

DE provides a flexible and convenient way for individuals to pursue their educational goals without having to compromise on their work, family, or social commitments. For example, the study of Hannay and Newvine carried out in 2006 with 217 adults, concluded that DE is highly favored by students due to its ability to facilitate the management of their various responsibilities. Despite the fact that distance learning is indicated as a favored approach among students for fulfilling responsibilities; as Demirli (2002) stated, the perception of DE is impacted by its quality as well as various factors such as the infrastructure and availability to the students. Student isolation, on the other hand, is considered a concern in DE by Banas & Emory (1998) though it is inevitable. Thus, they noted that “courses can be designed to encourage or require synchronous/asynchronous student-to-student interaction to enhance the learning experience” (p.377). Yacob, Kadir, Zainudin, and Zurairah (2012) focused on learner variables for an effective online education regarding individual differences such as age, gender, and grade. It is apparent that the realm of education and training has been a surge in interest for distance learning, primarily due to significant global shifts. Consequently, numerous research endeavors have been made to effectuate the essential improvements in DE schemes aimed at equipping learners with the necessary competencies including mostly kinds of autonomous behavior.

2.4.2. The Place of Self-Direction in Distance Education

The greater part of the literature on DE has typically concentrated on the efficacy and quality of DE, learner autonomy, and viewpoints and opinions on distance learning in order to enhance the productivity of the developmental procedure both for the curricula in general and for learners. At present, it is commonly recognized that distance learners bear a significant obligation to establish self-directed and autonomous approaches to learning since they are obliged to conduct learning experiences mostly on their own in isolation. By the same token, Collins (2008) believed that “autonomy will develop as online interaction becomes more meaningful and effective, and the use of tools more appropriate; as social presence supports cognitive complexity development; and as independence and isolation are gradually replaced by close interdependence isolation are gradually replaced by close interdependence and collaborative work” (p.535). The study of Drennan, Kennedy, and Pisarski (2005) proved how effective student attitudes might

be toward the quality of distance learning by concluding that positive perceptions toward technology and the autonomy of the students are highly influential on their satisfaction. This is the point where the significance of developing autonomy and self-direction becomes given that a recent study also showed self-directed learners have the capacity to be active in each field such as personal and professional development, history, health, science, and foreign language (Bonk & Lee, 2017).

A number of studies have postulated a convergence between autonomous behaviors (e.g. self-direction, self-regulation, self-management, self-efficacy, and so on) and DE. Paechter and Maier (2010) investigated aspects of e-learning courses that students consider favorable and found out that students were impressed with online learning for its ability to provide a clear structure for the learning materials, support self-regulated learning, and facilitate the distribution of information. Furthermore, it was established by the study of Solimeno et al. (2008) that online education can offer tailored academic options to students who struggle with time management and exhibit low anxiety but high problem-solving skills based on a comparison between the efficacy of F2F and computer-supported learning. In the years that followed, Xiao (2014) conducted a longitudinal study to analyze the learner agency in DE within the scope of self-efficacy, identity, motivation, and metacognition. The findings of the study pointed out that in DE, individuals hold greater responsibility for the self-management of their learning trajectory compared to F2F classroom settings. Fotiadou et al. (2017) examined the relation between learner autonomy and specific aspects of the learning process based on the DE setting and found that in DE, the degree of autonomy displayed by the learners was found to be higher than average yet they still required social engagement with both their peers and instructors regardless of their level of independence.

The research to date has been based on how and to what extent distance learners develop kinds of autonomous behaviors both in remote learning settings and in comparison with F2F learning settings. Numerous research studies demonstrated that DE students develop independent actions or in other words autonomous behavior (e.g. self-direction, self-regulation, self-management, motivation, etc.) as they become conscious of adjusting to the requirements of their learning journey.

2.4.2.1. Context of Türkiye

Within the Türkiye context in which English is taught as a foreign language

(EFL), autonomous behaviors, self-direction in particular, have been considered a vital component of the learning process since acquiring a foreign language demands constant exposition to that language including the out-of-classroom environments. Perhaps, the biggest leap toward realizing the importance of autonomous behavior within the framework of DE has been made during and after the global and local emergencies to be confronted such as pandemics and earthquakes. In the same vein, it has been mostly after this period that efforts have been made across programs to improve the quality of DE, educate individuals on this issue, and raise awareness for their own learning.

In one well-known recent research within the Türkiye context, Fırat (2016) aimed to measure the autonomy of DE students from 42 different programs, and the autonomy level of the distance learners was found to be high irrespective of the students' programs or gender. As for the EFL students in Türkiye, Altunay (2019) conducted a study to explore the perspectives of EFL students regarding distance language education and the results of the semi-structured interviews showed that while DE allows for time and place flexibility, F2F instruction is deemed more efficacious than DE. Öztürk Karataş and Tuncer (2020), on the other hand, examined the effect of emergency distance education (EDE) on the language skills development of pre-service EFL teachers. Participants of the study considered the content and implementation of online classes, the flexibility of time and place, the use of online resources, cost efficiency, and the role of the teachers as the advantages of the DE setting. Additionally, the most positively affected language skill was detected to be writing whereas the skill of speaking ended up being the most negatively affected one. To further investigate the role of the emergence of remote teaching due to the COVID-19 pandemic at a state university in Türkiye, Ağçam et al. (2021) carried out a qualitative study with 67 pre-service English language teachers. The findings indicated that participants find emergency remote teaching flexible, less time-consuming, and beneficial for self-confident students in virtual classrooms and even consider it as an opportunity for self-actualization. Lastly, Taşçı (2021) aimed to investigate the perspective of ELT students on emergency distance language education (EDE) within the scope of its suitability, effectiveness, teachability, and student habits. Findings showed that distance language learning offers benefits such as increased convenience and cost-effectiveness, along with the chance to enhance digital literacy. On the other hand, challenges including lack of self-discipline and motivation, lack of interaction between teachers and students or among peers, health issues, delayed feedback on assignments, and technological problems were commonly cited as drawbacks.

Overall, the common threads of the studies carried out around the world and at the national level have shown that DE programs have become increasingly popular in contemporary times, and their impact on learners' processes is contingent upon their qualifications, yielding both favorable and unfavorable outcomes. Moreover, due to its ability to promote self-direction and autonomy DE is efficacious in developing these skills.

2.5. Chapter Summary

This chapter presented the related literature regarding this study. To begin with, the framework of 21st-century skills was explained with the integration of English as a Foreign Language (EFL) and self-directed learning skills (SDL). Then, a comprehensive discussion was held related to the notion of self-direction, focusing on various models of SDL. Lastly, different learning settings in education were explained, specifically comparing face-to-face (F2F) and distance education (DE) within the Türkiye context.

CHAPTER III

METHODOLOGY

3.1. Introduction

This chapter will discuss the overall nature of the study by focusing on the rationale behind the method and the design of the study. In order to provide a clear and comprehensive understanding of the research, this chapter presents the criteria for participant selection, the chosen sampling method, the research context, data collection procedures, and data analysis tools.

3.2. Research Design

The nature of conducting scientific research lies in the rules and procedures of the research designs that are employed. Creswell and Creswell (2017) define research designs as “types of inquiry within qualitative, quantitative, and mixed methods approaches that provide specific direction for procedures in a research study” (p.49). While various factors, such as the research questions, research problems, participants, and means of data collection, influence an appropriate research design, a comprehensive understanding of these frameworks remains vital. According to Bryman (2012), quantitative research is outlined as “entailing the collection of numerical data, as exhibiting a view of the relationship between theory and research as deductive and a predilection for a natural science approach, particularly positivism, and as having an objectivist conception of social reality” (p.160). Meanwhile, qualitative research, which is predominantly used in the field of social sciences, is explained by Dörnyei (2007) as “involving the data collection procedures that result primarily in open-ended, non-numerical data which is then analyzed primarily by non-statistical methods” (p.24).

Based on the definitions in the research methodology literature, the aim of quantitative research is to quantify variables and identify patterns using statistical analysis while collecting numerical data in order to generalize results to a larger population. On the other hand, qualitative research is concentrated on comprehending complex phenomena by means of thorough investigation and interpretation of subjective viewpoints, experiences, and meanings. It also aims to reveal insights and produce elaborate descriptions through the use of non-numerical data collection techniques.

However, over the past two decades, the mixed method has become increasingly popular and is now acknowledged as a third research approach by blending elements of qualitative and quantitative research techniques to produce more robust outcomes. One of the most recently known definitions of the mixed method design was made by Creswell (2021) as an approach to research “in the social, behavioral, and health sciences in which the investigator gathers both quantitative (closed-ended) and qualitative (open-ended) data, integrates the two, and then draws interpretations based on the combined strengths of both sets of data to understand research problems” (p.19). However, depending on the order and analysis of the data processes, various mixed-method approaches emerged; convergent parallel, embedded, explanatory sequential, and exploratory sequential being the most commonly adopted ones.

In the current study, the SDL skills of prospective EFL teachers (PEFLT) concerning the dynamics of their embarking upon the department through DE or F2F, according to participants' GPAs, gender, and learning settings, were investigated, as well as participants' overall perspectives of learning settings. In line with this objective, an explanatory mixed method design was used, integrating the first quantitative data collection and analysis process followed by the qualitative data collection and analysis process in order to effectuate a well-grounded and comprehensive understanding of the phenomena. Therefore, by integrating quantitative and qualitative designs in sequential order, the results of the quantitative data will be fortified by the results of the qualitative data. By the same token, to gain a thorough comprehension of the research problem and enable a more profound examination of the research questions by combining the advantages offered by both quantitative and qualitative methodologies respectively, this study integrated both qualitative and quantitative techniques with the analysis of firstly, Aşkın Tekkol and Demirel's (2018) scale of “Self-Directed Learning Skills Scale” then, a qualitative online open-ended questionnaire. Table 1. demonstrates the research questions and methods used, as well as the data collection tools with a reference to each research question.

Table 1.

Research Design of the Study

Research Questions	Methods	Data Collection Tool
Q1: To what extent, if any, do prospective EFL teachers (PEFLT) demonstrate self-directed learning skills (SDL) in their learning processes?	Quantitative Approach (SPSS)	Self-Directed Learning Skills Scale
Q2: Are there any differences in the prospective EFL teachers' (PEFLT) self-directed learning skills (SDL) based on gender, learning setting, and GPA?	Quantitative Approach (SPSS)	Self-Directed Learning Skills Scale
Q3: What are the prospective EFL teachers' (PEFLT) perceptions of F2F and DE learning settings?	Qualitative Approach (MAXQDA)	Open-ended Questionnaire
Q4: How do the F2F and DE learning settings affect prospective EFL teachers' (PEFLT) self-directed learning (SDL) skills? If so, in what ways?	Qualitative Approach (MAXQDA)	Open-ended Questionnaire

3.2.1. Explanatory Mixed Method

Teddlie and Tashakkori (2009) interpret the mixed method design as an approach to integrating quantitative and qualitative research methodologies in one or multiple research studies by a researcher or a group of researchers. In the literature, mixed method design is also heavily relied upon due to its ability to provide more accurate inferences and reduce the researcher's tendency towards bias by relying solely on one methodology (Tashakkori & Teddlie, 2009).

The mixed method in research is also divided into its own contingent upon several factors, such as the research inquiry, characteristics of the data, and objectives of the research. Creswell and Plano Clark (2011) point out six mixed-method research designs dependent mostly on timing and sequence aspects: convergent parallel, explanatory

sequential, exploratory sequential, embedded, transformative, and multi-phase designs (cited in Cohen et al., 2018, p.39). However, regarding research methodology, the most basic mixed-method designs are exploratory sequential, explanatory sequential, and convergent parallel which are deemed highly suitable and applicable for a range of research purposes. Within this research context, Creswell (2015) discusses the purpose of explanatory sequential design as “to study a problem by beginning with a quantitative strand to both collect and analyze data and then to conduct qualitative research to explain the quantitative results” (p. 37). One advantage of this design underlies in its sequential structure, where each phase contributes to the subsequent one and allows for clear identification of separate stages in conducting the design (see *Figure 4*). Furthermore, Creswell provides 4 steps to follow in an explanatory sequential design; starting with the collection and analysis of the quantitative data followed by examination of the quantitative analysis with the purpose of determining first, what results need further explanation in the qualitative phase, and secondly, which questions should find an answer in the qualitative data process. Thirdly, conducting the qualitative data collection and analysis phase to elaborate and clarify more on the quantitative results. Lastly, putting together the qualitative and quantitative results to understand how they complete each other (2015, p.38).

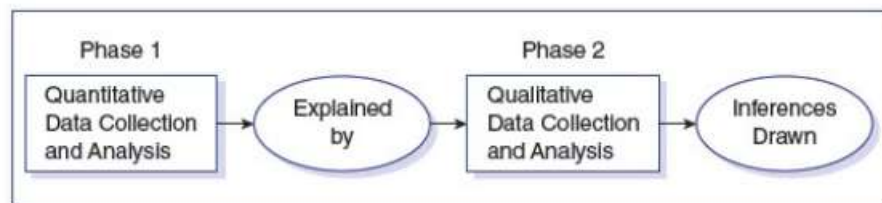


Figure 4. Explanatory Sequential Design

Source: (Creswell, 2015)

Due to its elaborate nature, conducting mixed-method research and explanatory sequential design, in particular, necessitates researchers to follow meticulous steps for integrity and clarity. Allowing that an explanatory sequential design has its advantages, such as its straightforwardness and chance for further exploration of the quantitative results, its time-consuming nature, and the practicality of gathering and processing data from both types are counted as the limitations of the design (Ivankova et al., 2006). When all factors are considered together, the rationale for conducting an explanatory sequential

design for this study was its trait of offering a systematic and rigorous methodology for research, taking advantage of the benefits presented by both qualitative and quantitative approaches to reach an all-encompassing understanding of the research topic.

3.3. Setting and Participants

The process of participant selection in research is of high importance since the meticulous identification and incorporation of individuals are necessary to produce precise and significant outcomes. Selecting participants and subsequently cases for a study is known as sampling among the research steps, and it necessitates the implementation of a proper technique to attain an efficient data collection process. Neuman (2014) defined a sample as “the small set of cases a researcher selects from a large pool and generalizes to the population” (p.240). It would be right to state that sampling is one of the prominent steps in conducting research with the aim of gaining a broader understanding of a larger group by investigating a small number of participants, groups, or cases.

3.3.1. Participants

In this study, the participants were 175 prospective EFL teachers for quantitative and 17 for qualitative data collection procedures in total, all of whom are studying at 12 different state universities in Türkiye in the Department of English Language Teaching. The study group was chosen in two stages: firstly, for the quantitative data collection process (175 PEFLT), convenience sampling (72,6% Female and 27,4% Male) was used with the principle of accessibility to the researcher. Secondly, the qualitative data collection process of the research was conducted based on voluntary sampling, also known as self-selection sampling (17 prospective EFL students, 64,7% Female, 35,3% Male) in which participants voluntarily agreed on participating in the qualitative data collection procedure. It should be noted that voluntary sampling in the qualitative data collection process was provided by willing participants who had also participated in the quantitative data collection process and who desired to contribute further to the research process.

In a research study, two sampling approaches are commonly used, namely, probability and non-probability sampling, depending on their representativeness and the ability to generalize the findings to a larger population. Probability sampling reflects the

chances of members of the wider population being selected for the sample, whereas non-probability sampling does not reflect the chances of members of the wider population being selected for the sample (Cohen et al., 2018). However, in this study, the researcher employed a non-probability sampling approach distinctively convenience and voluntary sampling. Cohen et al. (2018) state that a “non-probability sample derives from the researcher targeting a particular group, in the full knowledge that it does not represent the wider population; it simply represents itself” (p.217). Since the quantitative data collection process was carried out with convenience sampling, the availability and accessibility of the participants were taken into account. Bryman (2012) identifies convenience sampling as “the one that is simply available to the researcher by virtue of its accessibility” (p.201). Therefore, in this study, individuals were chosen on the basis of their availability and interest to partake in the study. In the aspect of collecting qualitative data, voluntary sampling was utilized to acquire a comprehensive understanding of the perspectives and experiences of the PEFLT within the scope of DE and F2F learning settings. The voluntary sampling process was carried out via e-mail addresses that the students willingly attached to the end of the quantitative data collection tool. Participant profiles of the quantitative and qualitative data collection processes were described in Table 2 and Table 3, in terms of gender, age, GPA, and learning setting in which they studied for a period of time at the beginning of their undergraduate studies based on participants’ self-report.

Table 2.

Demographic Ratio of the Participants for Self-Directed Learning Skills Scale

Demographic Variable	Groups	(n)	(%)
Gender	Female	127	72.6
	Male	48	27.4
	N (Total)	175	100
Age	18-24	167	95.4
	25-34	6	3.4
	35-44	2	1.1
	N (Total)	175	100
GPA	2.00-2.50	18	10.3
	2.50-3.00	64	36.6
	3.00-3.50	73	41.7
	3.50-4.00	20	11.4
	N (Total)	175	100
Learning Setting	Face-to-Face	90	51.4
	Distance Education	85	48.6
	N (Total)	175	100

Table 2 shows that there were 175 participants in total, consisting of 127 females (72.6%) and 48 males (27.4%). The ages of the participants ranged from 18-24 to 35-44, with a predominance of 18-24 year-olds. Accordingly, 167 students (95.4%) were between the ages of 18-24, 6 students (3.4%) were between the ages of 25-34, and lastly, 2 students (1.1%) were between the ages of 35-44. Based on the academic grade point averages (GPA) of the participants; 18 participants' GPA (10.3%) were between 2.00 – 2.50, 64 participants' GPA (36.6%) were between 2.50 – 3.00, 73 participants' GPA (41.7%) were between 3.00 – 3.50, and finally, 20 participants' GPA (11.4%) were between 3.50 – 4.00. Lastly, in accordance with the learning settings of the students with a view to being educated through face-to-face (F2F) or distance education (DE), 90 of the participants with a rate of 51.4% started their undergraduate education in an F2F setting whereas 85 participants with a rate of 48.6% were educated through a DE setting as a beginning.

Table 3.

Demographic Ratio of the Participants for the Open-Ended Questionnaire

Demographic Variable	Groups	(n)	(%)
Gender	Female	11	64.7
	Male	6	35.3
	N (Total)	17	100
GPA	2.00-2.50	1	5.9
	2.50-3.00	6	35.3
	3.00-3.50	8	47.1
	3.50-4.00	2	11.8
	N (Total)	17	100
Learning Setting	Face-to-Face (2 nd)	4	23.5
	Distance Education (3 rd)	13	76.5
	N (Total)	17	100

As for the qualitative data collection process of the research, which was stated above, an open-ended questionnaire was sent to 17 participants aged between 18-24 who volunteered to participate from 3 different state universities in Türkiye. 11 of the participants were females (64.7%) whereas 6 of them were males (35.3%). In terms of learning settings, 4 participants (23.5%) were F2F-educated and 13 participants (76.5%) were educated through the DE setting. Most of the participants' GPAs fell in the range between 3.00-3.50 with 8 participants (47.1%) followed by 6 participants (35.3%) between 2.50-3.00, 2 participants (11.8%) between 3.50 – 4.00, and lastly, 1 participant (5.9%) between 2.00 – 2.50.

3.3.2. Research Setting

This study was carried out during the spring semester of the 2022-2023 academic year, with 175 participants from 12 state universities for the quantitative data collection process and 17 participants from 3 state universities for the qualitative data collection process. A variety of universities in Türkiye with a Department of English Language Teaching were included in the research setting, yet to preserve confidentiality and privacy, the names and locations of the universities were omitted. Likewise, in the sequential data collection process, individuals who expressed their interest in participating in the second phase of data collection were sent an online open-ended questionnaire as a part of qualitative data collection.

3.4. Data Collection Tools

In this research, the quantitative data was collected through a 5-point Likert scale developed by Aşkın Tekkol and Demirel (2018) consisting of 21 items with the purpose of assessing individuals' SDL skills (see Appendix 1). Bryman (2012) defines the Likert scale as a method of self-reporting where individuals indicate their agreement/disagreement with a series of statements. Although Likert-type scales are primarily known for their ability to indicate the level of agreement, there are a variety of Likert scales that indicate a variety of features, such as frequency, satisfaction, quality, etc. Accordingly, in Likert-type scales, each statement is assigned a numerical value, and the overall score represents one's attitude or belief regarding the topic at hand.

On the other hand, to collect qualitative data for the study, an open-ended questionnaire was administered. The researcher carefully selected seven open-ended questions to assess the participants' development of SDL skills in different learning settings (see Appendix 2). The purpose of an open-ended questionnaire is to gather qualitative or open-ended responses from participants as part of a research study to fortify deeper insights into participants' perspectives.

3.4.1. Self-Directed Learning Skills Scale

"Self-Directed Learning Skills Scale", which was developed by Aşkın Tekkol and Demirel (2018), is divided into four sub-dimensions as motivation (7 items), self-control (5 items), self-monitoring (5 items), and self-confidence (4 items); a total of 21 items from these sub-dimensions ultimately aim to measure individuals' SDL skills.

Participants of this research were asked to choose their frequency for each item on a 5-point Likert scale, with the rate of 5=Always, 4= Usually, 3= Sometimes, 2=Rarely, and 1=Never.

The construct validity of the scale was measured by the developers through the use of a confirmatory factor analysis on a sample of 2533 students attending from one public and one private university which showed good or acceptable values. Accordingly, as a result of the reliability analysis, the Cronbach's Alpha internal consistency coefficient value of the scale was found .895 by the developers of the scale showing a good degree of reliability. When the reliability values of the scale sub-dimension were examined, the Cronbach's Alpha values were seen as motivation being .826; self-control being .799; self-monitoring being .768, and self-confidence being .690. Validity and reliability analyses of the "Self-Directed Learning Skills Scale" demonstrated that it is strongly reliable in terms of assessing the self-direction levels of the target population. Since the reliability measures of scales might change depending on the sample size, in this research in which 175 PEFLT participated, overall Cronbach's Alpha value of the scale was found .867 indicating a high degree of reliability as well.

3.4.2. Open-ended Questionnaire

The qualitative data collection process of the research was achieved through the use of an open-ended questionnaire distributed via the online platform Google Forms consisting of 7 open-ended questions (see Appendix 2) with the purpose of delving more into the participants' SDL skills, the criterion of changing based on F2F and DE learning settings in particular. Prior to distributing the open-ended questionnaire to the participants, three experts were consulted for their assessment of aspects such as comprehensibility, coherence, relevance, and flow. After testing the suitability of the open-ended questionnaire, the qualitative data collection tool was sent out to the participants. Additionally, participants were given ample time to express themselves in the best way possible without any imposed time constraints.

Integrating open-ended questions into the process of this research was highly important since they are accepted as particularly crucial for exploring complex issues. Cohen et al. (2018) regarded open-ended questions as a window of opportunity for respondents to share their insights and perspectives on a particular issue while providing respondents with the freedom to express their thoughts as they wish and in their own

words. Another criterion to touch upon is the way of presenting open-ended questionnaires to the participants that in this research subject, the open-ended questionnaire was presented to participants both in English and Turkish (participants' native language) and participants were asked to express themselves in the language that best represents themselves. To this end, the fact that administering questionnaires in the learners' native language was also found essential in the literature (Mackey & Gass, 2016). Therefore, the qualitative data collection process which was followed by the quantitative one was conducted through an online open-ended questionnaire written in both in the target and native language of the participants without any time constraints.

3.5. Data Collection Procedure

Prior to the data analysis process, a total of 175 participants completed the Self-Directed Learning Skills Scale which consisted of 4 sections; informed consent form, demographic information, the SDL section with scale items, and the section of contact information for voluntary participation in the qualitative data collection process was sent out to the participants via Google Forms. The data collection process for the scale took approximately one month to complete on average. Given that participation in the research was based on convenience, the distribution of individuals from each university was not equal. In order to assess participants' self-directedness, the researcher established connections with participating universities, and ultimately universities and students who voluntarily agreed to participate completed the scale.

In terms of the qualitative data collection process, an open-ended questionnaire with seven open-ended questions was formulated and distributed to the participants with the purpose of gaining deeper insights into their viewpoints concerning the SDL skills of the students with a distinction between F2F and DE learning settings. At the beginning of the study, the qualitative data collection process was planned to be conducted through face-to-face semi-structured interviews with the volunteer participants. However, due to the earthquakes that occurred in Türkiye on February 6, in 2023 with the epicenter of Kahramanmaraş and a sudden shift of education processes in universities to DE environments, the qualitative data collection process was completed within two weeks by participants responding to the open-ended questionnaire distributed through Google Forms. The open-ended questions of the questionnaire were presented to the participants in both English and Turkish for clarity and expressibility. Likewise, participating students

were given the freedom to utilize their preferred language (either Turkish or English) to express themselves when writing down their responses.

3.6. Data Analysis

In line with the nature of explanatory mixed-method design applied in this study, the dataset underwent a systematic and sequential analysis; firstly, examining quantitative data to identify patterns and trends, followed by an in-depth qualitative data analysis to enrich and contextualize the quantitative findings.

3.6.1. Analysis of the Quantitative Data

The data obtained from the “Self-Directed Learning Skills Scale” (5=Always to 1=Never) were subjected to a series of statistical analyses through the Statistical Package for Social Sciences (SPSS). Initially, descriptive statistics were employed to determine the demographic characteristics of the participants in the study with the frequency and percentage measures. To ensure appropriate inferential statistics, a normality test was performed, and based on the skewness and kurtosis values, it was concluded that the data followed a normal distribution.

Table 4.

Skewness and Kurtosis Coefficients for Self-directed Learning Skills Scale and Sub-dimensions

Scale and Sub-Dimensions	Skewness	Kurtosis
Self-Directed Learning Skills Scale	-.454	.056
1. <i>Motivation</i>	-1.013	.824
2. <i>Self-control</i>	-.281	-.066
3. <i>Self-monitoring</i>	-.439	-.413
4. <i>Self-confidence</i>	-.397	-.054

Table 4 presents the skewness and kurtosis values of the Self-Directed Learning Skills Scale in terms of the probability distribution of the data set. Accordingly, it is seen that skewness values fall within a range of -1.013 to -.281, while the kurtosis values are within a range of -.413 to .824. George and Mallery (2016) considered the skewness and kurtosis values ranging between ± 1.0 as acceptable; however, depending on the cases, the values between ± 2.0 is also considered acceptable. Thus, it was concluded that the data

set of the present study shows normal distribution and parametric inferential tests can be conducted.

Prior to conducting inferential statistics, the mean scores for each sub-dimension (motivation, self-control, self-monitoring, self-confidence) were calculated and a total score for SDL skills was determined for each individual. Subsequently, tests were carried out based on these scores. To investigate the relationship between gender and SDL skills along with the relationship between participants' learning settings and SDL skills, independent samples t-tests were conducted. These analyses aimed to determine if there were any significant differences in SDL skills based on gender and the type of learning settings (F2F and DE). Moreover, one-way ANOVA was performed to assess the relationship between participants' GPAs and SDL skills. In cases where the one-way ANOVA analysis yielded significant differences, post-hoc tests (e.g., Tukey's HSD and Bonferroni) were employed to identify specific pairwise differences between GPA groups and ascertain which groups differed significantly in terms of their SDL skills.

3.6.2. Analysis of the Qualitative Data

In the subsequent phase of the research, in order for qualitative open-ended questionnaires to be analyzed, open-ended responses to which participants responded in Turkish were translated into English. This was done to ensure that participants' responses were in a consistent language format for the analysis process. To facilitate systematic thematic analysis, the responses were exported into MAXQDA, a qualitative data analysis software. One of the most notable definitions of thematic analysis was proposed by Braun and Clarke and they considered thematic analysis as a systematic approach to identify, analyze, and report patterns or themes within a data set (2006). On the other hand, Lochmiller (2021) emphasized that thematic analysis entails the recognition of recurring patterns, which are then presented by researchers as overarching statements or themes. Instead of relying solely on pre-determined categories, the emergence of codes was guided by directly analyzing and extracting patterns from the data in an inductive way. During the coding process, recurring codes were meticulously organized into initial themes. It is important to mention that these themes emerged from the data and indicate patterns of experiences and perspectives of the participants. The identified themes were further refined and validated after ensuring that each theme represented the content and the meaning of the responses accurately. To increase the validity and reliability of the

thematic analysis, a peer debriefing method was implemented. The insights of knowledgeable peers and colleagues in qualitative research were sought to get feedback on tasks in coding, coding process, emergent codes, and themes so that diverse perspectives were ensured of the findings. Ultimately, the themes were interpreted within the framework of the research objectives, which aimed to explore participants' perceptions and experiences with SDL skills in both F2F and DE settings.

3.7. Ethical Issues

In accordance with ethical considerations, this study underwent a thorough approval procedure, starting with the official approval of the ethics committee of Çukurova University Institute of Social Sciences on March 8, 2023 (see Appendix 3). Subsequently, explicit permission for the utilization of the “Self-Directed Learning Skills Scale” as the determined quantitative data collection tool was obtained through direct correspondence with the scale developer via e-mail (see Appendix 4). The inclusion of the “online open-ended questionnaire” as an additional tool for the data collection also necessitated the implementation of informed consent protocols. Consequently, an informed consent form was introduced at the outset of both the “Self-Directed Learning Skills Scale” and the “online open-ended questionnaire” to ensure the ethical integrity of the research (see Appendix 1-2). This ethical process, which involved ensuring the participants' voluntary participation, guaranteed that the research was carried out in line with the principles of transparency, autonomy, and confidentiality.

3.8. Chapter Summary

This chapter summarized the overall framework of the study conducted by the researcher. For that matter, the research design was thoroughly explained, and detailed information was provided on the implementation of the research setting and participant selection procedures. Furthermore, the rationale behind the data collection tools used for this research and the analyses conducted based on the purpose was elucidated.

CHAPTER IV

FINDINGS

4.1. Introduction

In this chapter, the findings will be discussed regarding how prospective EFL teachers' (PEFLT) self-directed learning skills (SDL) change according to gender, GPA, and different learning settings, and their overall perceptions of these learning settings. Under the explanatory mixed method design, quantitative data results including t-test and one-way ANOVA tables are presented in the first section indicating whether there are significant differences among participants' SDL skills based on gender, GPA, and learning settings. Secondly, the findings of the thematic analysis are presented in the second section followed by the first section including tables and excerpts from the participants' responses. This section focuses on examining prospective teachers' perceptions of learning settings that contribute to the development of SDL learning skills.

4.2. Findings of the Self-Directed Learning Skills Scale

The data collected from the Self-Directed Learning Skills Scale (5=Always to 1=Never) was analyzed using SPSS (Statistical Package for the Social Sciences). In the conducted tests, scale sub-dimensions (motivation, self-control, self-monitoring, and self-confidence) and the SDL Skills Scale score were taken to explain how independent variables (e.g. gender, GPA, learning setting) relate to the development of SDL skills.

4.2.1. Descriptive Analysis Findings of Prospective EFL Teachers' Self-Directed Learning Skills Scale

To assess the SDL skills of PEFLT within the scope of gender, GPA, and learning setting, it is essential to initially calculate the key statistical measures such as minimum, maximum, mean, mode and standard deviation values to determine the overall SDL profile of the participants. Therefore, the descriptive statistics of the participants' level of SDL skills are presented in Table 5 to establish a general framework.

Table 5.

Descriptive Analysis Results of Prospective EFL Teachers' Self-Directed Learning Skills Scale and Sub-dimensions

Scale and Sub-Dimensions	N	Minimum	Maximum	$\bar{X}$	SD	Mode
Self-directed Learning Skills Total Score	175	2.83	4.94	4.04	.43	4.60
1. <i>Motivation</i>	175	3.00	5.00	4.47	.43	4.71
2. <i>Self-control</i>	175	1.40	5.00	3.53	.70	3.80
3. <i>Self-monitoring</i>	175	2.40	5.00	3.92	.59	4.20
4. <i>Self-confidence</i>	175	2.75	5.00	4.23	.50	4.25

When descriptive statistics of the participants' SDL skills were examined, it was seen that the mean value of the total score of the participants' SDL skills is $\bar{X}=4.04$, motivation $\bar{X}=4.47$, self-control $\bar{X}=3.53$, self-monitoring $\bar{X}=3.92$, and self-confidence $\bar{X}=4.23$. Based on the descriptive analysis, it can be said that PEFLT possess a high level of self-directed skills, with a particular emphasis on motivation sub-dimension as the highest which is followed by self-confidence, self-monitoring, and self-control.

4.2.2. T-test Analysis Findings of Prospective EFL Teachers' Self-directed Learning Skills and Gender

To examine the differences in SDL skills between genders, an independent sample t-test was performed. Table 6 demonstrates whether there are any differences in SDL skills of PEFLT based on gender.

Table 6.

T-Test Results on Whether the Self-Directed Learning Skills of Prospective EFL Teachers Differ According to Gender

Scale and Sub-Dimensions	Gender	N	$\bar{X}$	SD	df	t	p	η^2
Self-directed Learning Skills Total Score	Male	48	3.98	.44	173	1.065	.288	-
	Female	127	4.06	.43				
1. <i>Motivation</i>	Male	48	4.47	.41	173	-.005	.996	-
	Female	127	4.47	.44				
2. <i>Self-control</i>	Male	48	3.32	.82	173	2.192	.032*	.394
	Female	127	3.61	.64				
3. <i>Self-monitoring</i>	Male	48	3.89	.62	173	.468	.640	-
	Female	127	3.93	.57				
4. <i>Self-confidence</i>	Male	48	4.25	.46	173	-.231	.817	-
	Female	127	4.23	.51				

*p<.05

Based on the independent t-test results; it was seen that PEFLT's total score of SDL skills [$t_{(173)} = 1.065$; $p > .05$] along with sub-dimensions; motivation [$t_{(173)} = -.005$; $p > .05$], self-monitoring [$t_{(173)} = .468$; $p > .05$], and self-confidence [$t_{(173)} = -.231$; $p > .05$] did not show a significant difference according to gender. In this respect, it can be noted that regardless of gender, PEFLT exhibit similar levels of SDL skills.

On the other hand, it was determined that the gender of the PEFLT had a significant impact on the self-control sub-dimension [$t_{(173)} = 2.192$; $p = .032$; $p < .05$] in favor of female participants. In other words, female PEFLT's level of self-control was found to be higher than males. Additionally, on the basis of the effect size values obtained from the t-test analysis ($\eta^2 = .394$), the difference between male and female participants' self-control within the scope of SDL skills was of moderate significance.

4.2.3. T-test Analysis Findings of Prospective EFL Teachers' Self-directed Learning Skills and Learning Setting

The results of the independent t-test analysis of whether the SDL skills of PEFLT teachers differ based on the learning setting are presented in Table 7.

Table 7.

T-Test Results on Whether the Self-Directed Learning Skills of Prospective EFL Teachers Differ According to Learning Setting

Scale and Sub-Dimensions	Learning Setting	N	$\bar{X}$	SD	df	t	p	η^2
Self-directed Learning Skills Total Score	F2F	90	3.97	.47	173	-2.009	.046*	.324
	DE	85	4.11	.39				
1. Motivation	F2F	90	4.44	.45	173	-.836	.404	-
	DE	85	4.50	.40				
2. Self-control	F2F	90	3.41	.76	173	-2.295	.023*	.348
	DE	85	3.65	.61				
3. Self-monitoring	F2F	90	3.84	.63	173	-1.792	.075	-
	DE	85	4.00	.53				
4. Self-confidence	F2F	90	4.20	.51	173	-.970	.334	-
	DE	85	4.27	.48				

* $p < .05$

When independent t-test analysis results were examined in Table 7; no significant difference was found between the SDL Skills Scale's sub-dimensions of motivation [$t_{(173)} = -.836$; $p > .05$], self-monitoring [$t_{(173)} = -1.792$; $p > .05$], and self-confidence [$t_{(173)} = -.970$; $p > .05$] in terms of learning settings. Viewed in this way, it can be inferred that PEFLT's motivation, self-monitoring, and self-confidence levels in terms of their self-

direction did not vary depending on whether they received instruction through DE or F2F.

On the flip side, it was found that the overall SDL skills score [$t_{(173)} = -2.009$; $p=.046$; $p<.05$] and the sub-dimension of self-control [$t_{(173)} = -2.295$; $p=.023$; $p<.05$] showed a significant difference in terms of learning settings. Furthermore; based on the comparison in mean value differences, it is evident that the significant difference obtained is on the side of the DE learning setting. In order to determine the extent of significant differences, effect size values were calculated. With this, the effect size of the total score of the SDL skills ($\eta^2 = .324$) and self-control sub-dimension ($\eta^2 = .348$) was found small, which means although there is a noticeable difference between the means values of F2F and distance learners' SDL skills, the magnitude of this difference is not large enough to have an effect.

4.2.4. One-Way ANOVA Analysis Findings of Prospective EFL Teachers' Self-directed Learning Skills and GPA

The variation in SDL skills among PEFLT was analyzed using one-way ANOVA, as presented in Table 8 with the aim of determining whether there were any differences based on the academic grand point averages (GPA) of the participants.

Table 8.

One-way ANOVA Results Regarding Whether the Self-Directed Learning Skills of Prospective EFL Teachers Show Significant Differences According to Grade Point Average (GPA)

Scale and Sub-Dimensions	GP A	N	$\bar{X}$	SD	Between Subject Factors	SS	df	MS	F	p	η^2
Self-directed Learning Skills Total Score	2.00-2.50	18	3.95	.43	Between groups	1.497	3	.499	2.676	.049*	.044
	2.50-3.00	64	3.95	.46	Within groups	31.894	171	.187			
	3.00-3.50	73	4.09	.39	Total	33.392	174				
	3.50-4.00	20	4.22	.44							
1. Motivation	2.00-2.50	18	4.40	.38	Between groups	.958	3	.319	1.710	.167	-
	2.50-3.00	64	4.39	.49	Within groups	31.915	171	.187			
	3.00-3.50	73	4.54	.38	Total	32.873	174				
	3.50-4.00	20	4.55	.44							
2. Self-	2.00-	18	3.47	.81	Between	1.759	3	.586	1.176	.321	

<i>control</i>	2.50				groups							
	2.50-3.00	64	3.44	.72	Within groups	85.298	171	.499				-
	3.00-3.50	73	3.56	.64								
	3.50-4.00	20	3.77	.73	Total	87.057	174					
<i>3. Self-monitoring</i>	2.00-2.50	18	3.73	.59	Between groups	3.068	3	1.023				
	2.50-3.00	64	3.81	.63	Within groups	57.526	171	.336	3.040	.030*	.050	
	3.00-3.50	73	4.00	.52								
	3.50-4.00	20	4.17	.58	Total	60.594	174					
<i>4. Self-confidence</i>	2.00-2.50	18	4.22	.44	Between groups	1.060	3	.353				
	2.50-3.00	64	4.15	.52	Within groups	42.654	171	.249	1.416	.240		-
	3.00-3.50	73	4.26	.50								
	3.50-4.00	20	4.40	.44	Total	43.714	174					

*p<.05

As a preliminary step, the variances of group distributions were examined using Levene's test to determine which multiple comparison test to employ. Accordingly, the results indicated a homogenous distribution of variances in overall SDL skills score (LST= .369; $p>.05$), motivation (LST= 1.212; $p>.05$), self-control (LST= .488; $p>.05$), self-monitoring (LST= .746; $p>.05$), and self-confidence (LST= .779; $p>.05$) sub-dimensions.

Consequently, one-way ANOVA analysis was conducted to investigate whether there are differences in PEFLT's SDL skills based on GPA. The analysis revealed that the sub-dimensions of motivation [$F_{(3-171)}=1.710$; $p>.05$], self-control [$F_{(3-171)}=1.176$; $p>.05$], and self-confidence [$F_{(3-171)}=1.416$; $p>.05$] did not show a significant difference in view of GPAs. However, a significant difference was found in the total SDL scores of the participants [$F_{(3-171)}=2.676$; $p=.049$, $p<.05$], and the self-monitoring sub-dimension [$F_{(3-171)}=3.040$; $p=.030$, $p<.05$], regarding the GPA. In other words, it was seen that SDL score and self-monitoring sub-dimension within the scope of the contribution of the PEFLT's overall SDL skills differ based on GPAs.

To explore the source of the significant difference within the scope of SDL skills score and self-monitoring sub-dimension based on the variable of GPA, post-hoc Tukey HSD and Bonferroni tests were run yet these tests revealed no significant difference among any of the groups. That is to say, calculated effect sizes ($\eta^2=.044$ for SDL skills total score and $\eta^2=.050$ for self-monitoring sub-dimension) indicated that the differences

between groups were small to a certain extent and might not have a notable practical significance.

As a result of the conducted tests to determine if there were differences in PEFLT's SDL skills based on gender, learning settings, and GPA, several findings emerged. Accordingly, participants were found to have a high level of SDL skills with motivation being the most prominent sub-dimension. Secondly, it was determined that female PEFLT's level of self-control was found to be higher than male participants with a moderate significance. Lastly, it was seen that the scores for SDL skills and self-monitoring sub-dimension did not show any significant differences based on the participants' GPAs indicating that overall self-directed skills were not affected by their academic performance.

4.3. Findings of Open-ended Questionnaire

In an effort to gain deeper insight into the perspectives of PEFLT, a thematic analysis was conducted on the data obtained from the online open-ended questionnaire sent out to the participants once they completed the Self-Directed Learning Skills Scale (Aşkın Tekkol & Demirel, 2018). The purpose of this analysis was to understand participants' perceptions regarding different learning settings (F2F and DE) as well as their SDL skills within these contexts. The structure of the seven open-ended questions that were addressed to the participants consisted of obtaining the notion of advantages and disadvantages of F2F and DE learning settings, enhanced skills based on aforementioned learning settings, pieces of advice on F2F and DE to peers, the contribution of F2F and DE settings to SDL skills, comparison of SDL skills based on learning settings, and proposed changes of the participants. Accordingly, Table 9 presents the identified themes and corresponding codes obtained from the responses to open-ended questions, along with their frequency of mention.

Table 9.

Thematic Analysis Results on Prospective EFL Teachers' Perceptions of Learning Settings and Self-directed Learning Skills within the Context of F2F and DE Settings

Questions	Themes	Codes	Frequency
Q1: What are the advantages and disadvantages of being in F2F and DE?	Advantages of DE	Savings	4
		Reviewing the recordings	3
		Exploring diverse resources	2
		Others	2
	Disadvantages of DE	Inefficiency	5
		Demotivation	4
		Technological problems	4
		Lack of responsibility	4
		Inability to develop language skills	2
		Inequality of conditions	2
	Advantages of F2F	Social interaction	8
		Efficiency	4
		Enhanced motivation	3
		Increase in responsibility	2
		Skill development	2
	Disadvantages of F2F	Waste of resources	3
Q2: Which skills have you developed as a result of your experience with F2F and DE?	Skills developed in DE	Technology skills	6
		Research skills	3
		Listening skills	3
		Reading skills	2
		Cooperation	2
		Speaking skills	2
		Others	5
	Skills developed in F2F	Social skills	5
		Speaking skills	4
		All four language skills	2
		Writing skills	2
		Others	2
Q3: What advice would you give to someone your age who is considering F2F and DE?	Advice on F2F	Social development	2
		Others	5
	Advice on DE	Self-discipline	4
		Active participation	3
		Others	3
Q4: Do you think that F2F	Complete contribution	Autonomy	9

<i>learning contributes to the development of self-direction? If you think, why?</i>		Interactive learning setting	4
		Others	7
	No contribution	Individually developed skill	1
<i>Q5: Do you think that DE contributes to the development of self-direction? If you think, why?</i>	Complete contribution	Learner responsibility	3
		Learner independence	2
		Improved research skills	2
	No contribution	Procrastination	2
		Lack of participation	1
<i>Q6: In which learning environment (DE or F2F) do you have the most self-direction over your own learning?</i>	In favor of F2F	Comprehensiveness	1
		Learning process management	1
		Permanent learning	1
	In favor of DE	Saving time	1
		Flexibility	1
<i>Q7: What would you do if you could change how F2F and DE education were done?</i>	Changes in DE	Synchronous learning	3
		Integration of different resources	2
		Improved examination	2
		Others	3
	Changes in F2F	Experiential learning	6
		Learner-centered learning	2
		Others	2
	Changes in both settings	Course duration	2
		Others	2

Thematic analysis results yielded a categorization of themes encompassing the advantages and disadvantages of F2F and DE learning settings, skills acquired in both settings, recommendations for these learning settings, the impact of the learning setting on SDL skills, comparisons between participants' SDL skills based on different learning settings and finally, changes put forward by the participants for learning settings.

4.3.1. Analysis of Prospective Teachers' Perceptions of Advantages/Disadvantages of F2F and DE Learning Settings

Regarding the PEFLT's perceptions of the advantages and disadvantages of F2F and DE learning settings, it was seen that the majority of the participants emphasized the disadvantages of the DE learning setting ($f=22$), which was followed by the theme of

advantages of F2F learning setting ($f=21$) in terms of the frequency of mention. On the other hand, the theme advantages of the DE learning setting ($f=11$) were mentioned with a moderate frequency, whereas the disadvantages of the F2F learning setting theme ($f=3$) were the lowest. Selected excerpts from the participants based on the thematic data analysis were indicated below as P1, P2, and P3, etc.

P11: Lessons are inefficient, lecturers or students do not use technology effectively, and it is not possible to know for sure whether students are listening to the lessons. (Female/DE/GPA: 3.00-3.50)

P13: I have a hard time participating in and understanding the classes in DE. I know it should be considered an advantage since DE provides participation in the class anytime, anywhere either online or by watching the recordings later, but my own experiences are nothing like that. I get easily distracted when it is DE. (Female/DE/ GPA: 3.00-3.50)

PEFLT generally believed that the disadvantages of the DE learning setting outweigh its advantages, regardless of whether they initially began their undergraduate education in F2F or DE. However, the drawbacks of the DE learning setting mostly focused on the lack of participation and decreased motivation caused by the absence of a real classroom setting. Furthermore, it was discussed that not everyone can equally benefit from a DE learning setting due to varying access to technological tools and Internet connection.

P12: The advantage of DE is that it saves time, energy, and money since I spend most of my time on the road. (Female/DE/ GPA: 3.00-3.50)

As it is clearly stated, participants saw the DE learning setting as advantageous mostly in terms of saving time, energy, and money followed by the chance to watch lecture recordings at any time. Moreover, there was an emphasis on the opportunity for students to access a wide range of learning resources and develop their technological awareness.

P7: Students lose time and money in terms of transportation before and after classes. (Male/ F2F/2.50-3.00)

P17: F2F learning setting fosters an education process with a high-degree quality, more communicative classroom context, and last but not least more genuine relationships with peers and professors. (Female/ DE/ 3.50-4.00)

Although the money and time constraints associated with the F2F learning setting were considered a potential disadvantage, the majority of the participants expressed a positive view of the F2F learning setting. Participants stated that the F2F learning setting offers numerous advantages, including increased motivation, the development of individual responsibility, and skill enhancement. However, a significant number of the participants recognized that the main advantage of the F2F learning setting is its opportunity for social interaction. Overall, participants' perceptions regarding the advantages and disadvantages of F2F and DE learning settings revealed that they viewed the drawbacks of DE learning settings as being more compared to the advantages and disadvantages of F2F learning settings.

4.3.2. Analysis of Prospective Teachers' Perceptions of Developed Skills in F2F and DE Learning Settings

It should be acknowledged that the development of language and professional skills for PEFLT is crucial, irrespective of the learning settings they are in. When the participants' perceptions of developed skills were examined, it was seen that prospective teachers developed different skills in both F2F and DE learning settings. Based on the findings from the thematic analysis, the participants of the DE learning setting ($f=23$) are seen to demonstrate a higher frequency of skill development in terms of variety compared to their counterparts in the F2F learning setting ($f=15$).

P16: Through DE, my ability to use technology has improved. We started to use different apps to make learning more effective. (Female/DE/3.50-4.00)

P13: In DE, since we are getting many more assignments than we did compared to F2F, it improved my research skills. On the other hand, DE lessons taught me use technology well and improved my reading skills. (Female/DE/3.50-4.00)

The skills that participants acquired and developed the most in DE learning settings stand out as technology and research skills. Likewise, the development of these skills was attributed to the assignment system that the DE learning setting brings. There was also a wide range of skills acquired and developed by the participants, some of which showed less frequency yet are still important (e.g. listening and reading skills, cooperation, and problem-solving skills).

P3: Thanks to F2, I improved my social skills and ability to speak in front of people. So, I was able to meet a lot of new classmates. (Male/ F2F /3.00-3.50)

P4: I believe that I have improved my speaking, writing, and self-expression skills in F2F classes. (Female/DE/2.50-3.00)

In line with the theme of advantages of F2F learning settings, social skills, and speaking skills were stated as the most frequently acquired and developed skills. Moreover, it was revealed that prospective teachers demonstrated a higher frequency of skill acquisition and development in all four language skills. When overall perspectives of the participants were examined, it became apparent that the DE learning setting offers a wider range of skill development in terms of diversity, yet the F2F learning setting fosters more comprehensive skills in individuals. Finally, it can be said that participants with a GPA in the range of 3.00-3.50 developed more skills compared to participants with other GPAs.

4.3.3. Analysis of Prospective Teachers' Perceptions of Recommendations for F2F and DE Learning Settings

PEFLT were asked what advice they would give to their peers concerning the F2F and DE learning settings. Although participants advising that individuals should prefer the F2F learning settings ($f=11$) were in the majority, some individuals provided alternative recommendations for both F2F ($f=7$) and DE learning settings ($f=8$).

P8: I would advise them to be more active in both F2F and DE. They should participate in classes as much as possible. Specifically, for F2F education, I can recommend other people to diversify their friends as making different friends contributes to the teaching profession in terms of human relations. (Female/ F2F /3.00-3.50)

P10: Every individual learns differently, so try to understand your learning style first. However, I think the more you are exposed to the language, the better you learn and it happens better in an F2F learning setting. Of course, there are other factors. DE can be more comfortable if you are in a place where you will be exposed to the language in any case when you go out or if you have created such an environment for yourself. That is to say, when participants choose the learning settings, environmental factors play a great role. (Female/DE/3.00-3.50)

As noted above, the participants of the study stressed the vital role of social interaction and participation in both settings. Other than the social development aspect of the learning settings, advice on F2F learning settings also focuses on language exposure, determining individual differences, development of speaking skills, and integration of technology. By the same token, developing self-discipline was the most common recommendation for the DE learning setting whereas participants also gave advice on self-motivation and systematic progression for an effective learning process.

4.3.4. Analysis of Prospective Teachers' Perceptions of the Contribution of F2F and DE Learning Settings on Self-Directed Learning Skills

PEFLT's perceptions of the impact of learning settings on their SDL skills were analyzed pursuant to complete contribution and no contribution. A significant majority of the participants expressed the contribution of the F2F learning setting on SDL skills with the highest frequency ($f=22$) whereas the contribution of DE learning settings to the SDL skills showed a relatively low frequency ($f=8$).

P16: Students in a DE environment are typically accountable for managing their schedules, defining their learning objectives, and overseeing their advancement. This necessitates the cultivation of skills such as self-discipline, self-motivation, and time management, which are critical components of self-direction. (Female/DE/3.50-4.00)

P4: I don't think it contributed much, it caused me to procrastinate a lot. Since time management in the DE learning setting is under our control, I couldn't be a planned person. (Female/DE/2.50-3.00)

Participants stated that DE learning settings contribute to SDL skills in terms of encouraging individuals to develop responsibility, learning independence, and research skills. During this process, participants mentioned that they developed various strategies for managing their learning and acquired skills helping them to increase their SDL skills. Conversely, SDL skills were not affected by the distance learning settings as procrastination and lack of participation are the main factors.

P7: In the F2F learning setting, you have to take all the responsibility by yourself without any assistance from your professors or friends. I believe that this helps individuals to develop self-direction. (Male/ F2F /2.50-3.00)

P15: F2F learning provides opportunities for students to interact with their teachers and peers, share ideas and perspectives, and receive immediate feedback. This can help students develop self-direction by enabling them to identify their strengths and weaknesses, set goals, and take responsibility for their own learning. By interacting with their peers and teachers in person, students can also learn to communicate effectively, collaborate, negotiate, and resolve conflicts, all of which are essential skills for SDL. (Male/DE/2.50-3.00)

Autonomy and interactive nature of F2F learning settings were found to be integral components and main contributors in the development of SDL skills among PEFLT. In addition, scaffolding, readiness, and collaboration were highlighted as the contributors to the SDL skills even though with a low frequency of mention. Lastly, it is noteworthy to mention that few participants stated the intrinsic nature of SDL skills as being detached from external factors or learning settings. SDL skills were perceived as under individuals' control and responsibility.

4.3.5. Analysis of Prospective Teachers' Perceptions of Self-directed Learning Skills based on F2F and DE Learning Settings

When the thematic analysis findings are examined, it has been found that PEFLT hold more favorable perceptions of F2F learning settings compared to DE learning settings within the scope of development of SDL skills. That is to say, with in-depth analysis, it was indicated that a significant majority of the participants experienced a substantial advancement in their SDL skills in F2F learning settings ($f=14$) whereas only a small number of participants stated that their SDL skills improved more in DE learning setting ($f=3$).

P11: However, since the DE process is far from the system we are used to and has a structure that requires more equipment, it might be more difficult for certain individuals to develop SDL skills. But, I think in the DE learning setting, we have the opportunity to acquire SDL skills more compared to F2F as I have the independence to guide my learning. Also, we do not spend time on the road and we are flexible in our learning. (Female/DE/3.00-3.50)

In spite of the fact that the DE learning process poses challenges due to its unfamiliar structure contrary to the traditional education system prevalent all over the world and its equipment requirements, it also yields unique opportunities for the

development of SDL skills. Accordingly, PEFLT attributed this unique aspect of the DE learning setting based on its development in SDL skills to the autonomy granted to learners. Participants noted that they can personalize their learning experiences based on their needs and preferences as well as DE learning settings' flexible schedule and resource savings that it provides.

P17: SDL develops more in F2F education settings. From my point of view, DE brings about laziness and procrastination in students making it harder for an individual to take responsibility for their learning. Therefore, DE setting hinders effective and constant monitoring and management processes. (Female/DE/3.50-4.00)

When the perceptions of participants who are in favor of the F2F learning setting in terms of SDL skills are taken into consideration, it is apparent that the DE learning setting might lead to laziness and procrastination among students, potentially impeding their capacity to take full responsibility for their learning process. Thus, most of the participants underscored the challenges in motivation and self-direction processes in the DE learning settings. Besides, participants pointed out that the DE learning setting could inhibit the monitoring and management processes which is necessary for an ideal learning process.

P12: Both learning environments contribute to SDL skills in different ways. For the DE setting, I can build on more of my learning since my time is not lost on commuting and I have the opportunity to organize my learning process independently. On the other hand, F2F education gives me more experience individually and makes my learning more permanent. Also, I can establish my own routine due to the numerous advantages I have in the F2F learning setting. (Female/ DE/ 3.00-3.50).

Apart from the participants stating SDL skills are more developed in F2F or DE learning settings, some participants asserted that SDL skills are self-determined and independent of the learning settings and can be developed in both learning settings when one learns to get the benefits of both. On this account, it is right to say that these two learning settings provide unique pathways for cultivating SDL skills. Last but not least, it was found that irrespective of the learning settings in which participants initially begin their education process, SDL skills tend to be more developed in F2F learning settings, and from this perspective shared by the majority, participants possess higher than average

GPA's (3.00-3.50). Therefore, it can be inferred that individuals with strong SDL skills in F2F learning settings tend to achieve a higher level of success.

4.3.6. Analysis of Prospective Teachers' Perceptions of Changes in F2F and DE Learning Settings

As the final stage of the qualitative data collection process, participants were asked to reflect on their experiences in different learning settings and share what could be improved or changed in both settings. Based on the thematic analysis, a majority of the participants proposed changes for the DE learning setting ($f=12$), while the changes suggested for F2F learning settings ($f=10$) were relatively few in frequency of mention. Along with the rest, this study also presented recommendations that are believed to be useful for both learning settings ($f=4$).

P3: I would use more student-benefit software to make the lessons more attractive to the students and increase their willingness to contribute to the lesson. (Male/DE/3.00-3.50)

P11: For DE, I would like to create a realistic environment with virtual reality glasses and teach the lesson in this way. You can see a similar version of the environment I am talking about in virtual reality classrooms and education in countries like China and Japan. (Female/DE/3.00-3.50)

One of the necessary changes for DE learning settings was found to be the enhancement of different technological resources and implementations in different aspects. The common objective among these perspectives is to enhance learning experiences by encouraging more interactive and engaging methods. To be more precise, the utilization of student-benefit software and use of the virtual reality (VR) technology were thought to be efficacious to enhance the participation and appeal of the online courses as well as boosting student motivation. In addition, promoting synchronous learning, fine-tuning the examination system, and providing technological assistance for students were also considered important.

P5: In F2F education, I would like an environment where we would be more exposed to the language, and the most important of these is to have an activity environment outside of the school where the language can be used. (Female/ F2F / 3.00-3.50)

P11: For F2F, instead of teaching in classrooms limited to four walls, I would teach in different authentic environments that are conducive to learning by doing and experiencing. (Female/DE/ 3.00-3.50)

While the F2F learning setting is considered the ideal environment for primarily developing SDL skills, participants offered suggestions to increase its purposefulness. The majority of the participants in the study emphasized experiential learning settings where they can bridge the gap between theory and practice with hands-on experiences. Thus, it would not be wrong to say that the PEFLT's perspective on the F2F learning setting challenges the conventional boundaries of the classroom and supports a dynamic approach mirroring the potential real-world experiences. Correspondingly, increased language exposure was also advocated highlighting the extracurricular activities to provide opportunities for practical language use. Finally, some participants recommended revising the durations of courses in both learning settings to maximize efficiency.

In the light of the overall findings from the thematic analysis, several key conclusions were drawn; firstly, based on the provided responses, it was found that while there are more disadvantages of DE learning settings, individuals have shown greater skill development in DE learning settings. On the other hand, the recommendations for learning settings turned out to be social development and interaction for F2F learning settings whereas DE learning settings focused on fostering self-discipline. Thirdly, it was revealed that the F2F learning setting has a greater contribution to the development of SDL skills among prospective teachers, leading to an above-average GPA (3.00-3.50). Along with this, it was concluded that in F2F learning settings, prospective teachers' SDL skills show the most growth regardless of factors such as gender, GPA, and initial learning setting.

4.4. Chapter Summary

In this chapter, findings were presented and discussed regarding how prospective EFL teachers' (PEFLT) SDL skills change according to gender, GPA, and learning settings. Additionally, participants' overall perceptions of the learning settings were examined in depth based on the qualitative data analysis. Thus, in this section, the findings of the study gathered from both the conducted scale and the online open-ended questionnaire were elucidated.

CHAPTER V

DISCUSSION

5.1. Introduction

In this section, the findings related to the current research will be discussed in parallel with the related literature based on the research questions. Particularly, the self-directed learning (SDL) skills of prospective EFL teachers (PEFLT) and how these skills vary according to gender, GPA, and learning settings will be discussed extensively. Moreover, the perceptions and insights of PEFLT based on different learning settings will be addressed exhaustively.

5.2. Discussion of the Findings Based on Research Questions

The primary objective of this current research was to delve into the SDL skills of PEFLT as they enter the department whether through DE or F2F learning settings considering participants' GPAs and gender. Likewise, it was aimed to thoroughly examine the participants' perceptions of learning settings and experiences. In pursuit of the aforementioned goal, an explanatory mixed method design was employed combining both the quantitative analysis of Aşkın Tekkol and Demirel's (2018) scale of "Self-Directed Learning Skills Scale" (ranged between 5=Always, 4= Usually, 3= Sometimes, 2=Rarely, and 1=Never) and online open-ended questionnaire constituted of seven questions. In this section, the findings obtained as a result of the conducted analyses were presented and discussed. The findings and discussions revealed valuable insights into the perceptions and experiences of PEFLT's SDL skills and insights into F2F and DE learning settings.

5.2.1. To what extent, if any, do prospective EFL (PEFLT) teachers demonstrate self-directed learning (SDL) skills in their learning processes?

The purpose of the first research question was to assess PEFLT's SDL skills both within the formal and informal learning settings, probing into their ability to direct their learning processes. On this account, descriptive statistics findings of the SDL Skills Scale yielded positive results denoting that PEFLT demonstrate a high level of SDL skills especially within the frame of motivation sub-dimension followed by self-confidence, self-monitoring, and self-control. The thematic analysis findings of the online open-ended

questionnaires partly aligned with the descriptive findings. PEFLT hold the belief that SDL skills are individual skills and can be applied irrespective of external factors, allowing individuals to sustain their learning process at any time and under any condition. However, PEFLT also associate SDL skills with learning settings contending that factors such as autonomy, active interaction, awareness of responsibility, and motivation offered by these settings are influential in this regard.

In the recent literature, studies focusing on SDL skills of adult learners in particular have gained prominence as the development of 21st century skills in education processes has become increasingly significant. Prior studies align with the results of this study, indicating that ‘undergraduate students (PEFLT in this case) demonstrate above average SDL skills’. Douglass and Morris (2014) inquired into the 80 undergraduate students’ perspectives on SDL skills by conducting focus group interviews with the participants and concluded that much of the participants’ learning was within their control although faculty and administrators have an impact on their desire and ability to learn. Likewise, in one of the recent studies carried out with undergraduate students in Türkiye, it was found that university students yield SDL skills above the mean score (Aşkın&Demirel, 2018). The fact that undergraduate students and PEFLT’s evaluated SDL skills are above the average might be attributed to the recent and necessary changes in the education system at both national and global levels, as well as the obligation for learning settings to be carried to the different systems. Since human nature is based on survival and adaptation to new circumstances, it can be argued that learners begin to assume responsibility for their learning processes at a certain juncture, prompted by factors outside of their control. This condition was also supported and stated by the study of Dişlen Dağgöl and İspınar Akçayoğlu (2023) in which the perceptions and experiences of both instructors and students who started fully online distance education at a state university were compared with a view to the experiences they had with EDE (Emergency Distance Education) in the previous term. Accordingly, students were found to show adaptation and readiness in the period after the EDE process when fully online education was initiated.

In the current study, motivation scored higher among the other sub-dimensions of the SDL Skills Scale suggesting that high motivation had an impact on the SDL skills of the participants. In this vein, the SDL skills of the learners are eminently associated with learner motivation (Teng, 2005; Boyer et al., 2014) and integration of technology (Plews, 2017). Although the scale utilized in the current research did not incorporate an aspect

focusing on students' technological equipment, Rashid and Asghar (2016) found that there is a positive relationship between the technology use and SDL skills of undergraduate students. That is to say, as students' knowledge of technology and usage increases, their SDL skills increase as well. On the other hand, studies by Heo and Han (2017) and Argün (2021) confirm the association between motivation and SDL skills. For instance, the research on undergraduate students' SDL skills and their perceptions along with experiences of academic motivation revealed that higher levels of SDL are linked with varying degrees of academic motivation, including a relationship between these two concepts (Argün, 2021). All in all, the findings of the current study, along with previous research in the field, highlight that learner motivation is a strong determinant of SDL skills development.

5.2.2. Are there any differences in the prospective EFL teachers' (PEFLT) self-directed learning (SDL) skills based on gender, learning setting, and GPA?

The second research question aimed to examine potential differences in the SDL skills of PEFLT based on gender, learning settings, and GPA. Therefore, the researcher sought to understand the nuanced influences that gender, learning setting, and GPA might have on the development and manifestation of SDL skills among participants.

On the question of whether the participants' SDL skills differ depending on gender, no significant gender-based differences were found. That is to say, PEFLT demonstrate equivalent levels of SDL skills irrespective of whether they are female or male. This study produced results that corroborate the findings of previous work on gender not being the determinant of SDL skills of undergraduate students. In the conducted research of Subekti (2021) based on the purpose of investigating L2 learners' SDL skills during online classes, no significant difference was found between female and male participants despite a high overall level of SDL skills among participants. Correspondingly, in a recent study by Güney (2022) which is closely similar to the current research, the total scores of undergraduate students' SDL skills did not show statistical significance based on gender.

Upon closer examination of the self-control sub-dimension of SDL skills, another finding emerged. Accordingly, female participants demonstrated higher levels of self-control compared to their male counterparts, achieving a moderate level of significance. This finding aligns to a certain extent with the emerging literature emphasizing that SDL

tendencies of female adult learners are significantly higher than the males (Hutto, 2009), yet this study does not fall strictly within the scope of self-control. Another important finding was that of Aşkın and Demirel's (2018) study on undergraduate students' SDL skills within the Türkiye context. Based on this research, using the same measurement tool (Self-Directed Learning Skills Scale by Aşkın & Demirel, 2018) as in the current research, it was found that female undergraduate students exhibited a higher level of SDL skills compared to male students. Despite the apparent contradiction between the above-mentioned findings of the literature that "there is not a significant difference between gender and SDL skills", they might be seen as similar to the finding of "there is a moderate significant difference between self-control and SDL skills" which is a pillar of SDL skills.

The results of the one-way ANOVA analysis were conducted to examine if there is any difference in the SDL skills among PEFLT based on their GPAs. Surprisingly, no significant difference was found contrary to the previous studies in the literature, indicating SDL skills do not have a determining effect on GPA. This discrepancy could be attributed to the fact that previous studies only analyzed data from a single learning setting while the participants of the current study are learners from different learning settings. One of the earliest studies conducted by Darmayanti (1993) propounded the positive correlation between SDL skills and students' GPA scores. In fact, there is an abundance of research that highlights the positive relationship between SDL skills and academic achievement (Chung, 2001; Sarmasoğlu, 2009; Edmondson et al., 2012). Cazan and Schiopca (2014) sought to examine the relationship between SDL and academic achievement. Accordingly, findings revealed a significant correlation between SDL skills and academic achievement. Similarly, Khiat (2015) investigated the relationship between academic performance and implementation of SDL based on eleven SDL markers and found that learners' SDL had a direct or indirect effect on their academic performance. It was also suggested in the literature that students experience significant academic gains when they engage in SDL in their learning process (Jaleel & Anuroofa, 2017). Lastly, in the Turkish context, Aşkın and Demirel (2018) asserted that students who achieve higher academic success also demonstrated significantly greater skills in SDL. Although SDL skills have been consistently linked to academic success in the previous research, the present study uncovered that there is no significant correlation between SDL skills and students' overall GPA. When Self-Directed Learning Skills Scale was analyzed quantitatively in the current research, it was found that there was a significant difference

in the participants' SDL skills and self-control noting that distance learners have slightly more SDL skills compared to F2F counterparts. The fact remains that the review of the literature uncovered a limited number of studies that examined the SDL skills of undergraduate students in both DE and F2F courses. In addition to being mostly associated with DE learning settings, these studies focused on a single learning setting and provided a narrow perspective on the topic. This contrasting situation can be ascribed to the fact that evaluation systems are not unified under a single roof and depend on individuals, institutions, and educational implementations.

The identification of a moderate significant difference in SDL skills attributed to varying learning settings, as found by the outcomes of this study, underscores the influential impact that DE learning settings exert on the development of such skills among learners. In fact, Song and Hill (2007) assert that the learning setting has a significant impact on how learners plan, monitor, and assess their learning process as well as affecting the motivation of learners in learning activities. Furthermore, the specific learning context determines how learners employ different resources and strategies to achieve their desired learning outcomes. One of the intriguing findings is that of Chou (2012) who examined undergraduate students' online learning performances and SDL skills and found that there is a positive relationship between students' SDL skills and performances in online learning settings. The finding of Chou is also consistent with that of Holzweber (2019), who found SDL skills effective when combined with e-learning due to its ability to enhance students' independence in terms of time, location, and pace. Perhaps, one study that closely relates to the present study is Güney's (2022) research, which examined undergraduate students of English Language School in Türkiye who were exposed to the sudden shift from DE to F2F education due to the pandemic. The purpose of this study was to assess the SDL skills of undergraduate students who continue their learning in the F2F learning setting. Ultimately, the results revealed that undergraduate students demonstrated a moderate level of SDL skills both in sub-dimensions and in general (Güney, 2022). As it is seen, in line with previous studies suggesting a connection between SDL skills and DE learning settings, this research also supported the existing literature to a certain extent by uncovering a moderate significant difference in specific dimensions of SDL skills affected by distinct learning settings. Thus, it might be noted that a positive attitude and prior exposure to online learning systems are significant predictors of student satisfaction and effective engagement (Ferrer et al., 2022). Furthermore, this condition might stem from the complex interplay of

individual factors, pedagogical approaches, and the evolving landscape of educational technologies, suggesting that nurturing SDL skills in future EFL teachers is a multifaceted process shaped by different elements across diverse learning settings.

5.2.3. What are the prospective EFL teachers' (PEFLT) perceptions of F2F and DE learning settings?

The primary objective of the third research question was to investigate PEFLT's perspectives on F2F and DE learning settings, focusing on two headings; advantages/disadvantages and developed skills. In this way, a more comprehensive and thorough process was implemented to address the purpose by gathering valuable insights from the participants.

According to the findings, participants highlighted that the F2F learning setting offers a multitude of advantages of which social interaction is the most recognized one followed by enhanced motivation, efficiency, and increase in responsibility while waste of resources turned out to be the only disadvantageous factor in F2F learning setting. Indeed, the advantages of the F2F learning setting have shown a balanced distribution with the disadvantages of the DE learning setting in terms of frequency in codes. Thus, it would be fair to say that the F2F learning setting holds a significant advantage over the DE learning setting. This divergence implies a nuanced viewpoint regarding the difficulties connected with the DE learning setting, accentuating the significance of tackling potential disadvantages such as heightened isolation and challenges in sustaining motivation. Nevertheless, the DE learning setting also offers a range of advantages such as time and money savings, exploring diverse resources, and reviewing the recordings yet technological problems and inequality of conditions were perhaps the most prominent results within the disadvantages of the DE learning setting. However, one junction point worth mentioning can be as Rappel (2017) stated "having perhaps come from traditional educational environments, learners may be unsure about how to navigate in environments with lessened control" (p.4).

Based on the previous research in the literature, various viewpoints arise in the mode of education comparison drawing on a range of factors, some of them argue that F2F learning is favored by the majority of masses whereas others highlight the convenience and improvement brought about by DE learning settings. In consistent with the current findings, the research of İspınar Akçayoğlu and Dişlen Dağgöl (2021) in

which the views of both instructors and students' views were investigated based on the efficacy of online teaching compared to F2F instruction, it was revealed that there is a tendency to the preference of F2F education over online education, highlighting the drawbacks of technical challenges, inadequate equipment, and sustaining concentration during online learning. The results of the current study in a way reflect also those of Sadeghi (2019), who also found that the opportunity to study from any location and time, cost savings, and flexibility are counted as advantages of DE learning settings while distractions, lack of social interaction, and contacting with instructors are some challenges encountered. Moreover, Muthuprasad et al. (2021) maintained that online learning can be more challenging due to the limitations in technology, lack of feedback, and instructors' incompetence in utilizing technological tools. These challenges were also underscored by certain participants in the present study. By and large, the participants in this study highlighted the drawbacks of the DE learning setting and expressed a tendency for the F2F learning setting, aligning with previous research indicating that undergraduate students have the inclination to prefer F2F learning settings (Hismanoğlu, 2012; Alhamami, 2017; İlin, 2019; Koşar, 2021).

When the skill development in analyzing the perceptions of PEFLT is taken into account in terms of learning settings, it is seen that while DE learning setting provides a variety of opportunities for skill development due to its diverse nature, F2F learning settings are more effective in fostering comprehensive skills in individuals. Thus, the finding emphasizes a trade-off between the range of skill opportunities in DE learning settings and the depth and thoroughness of skill development in F2F learning settings. According to participants, while DE learning settings primarily focus on developing technology, research, and reading-listening skills, F2F learning settings place a greater emphasis on the development of social, speaking, and higher-order thinking skills. It can be inferred that the need to have technological equipment and knowledge offered by the nature of DE learning settings encourages PEFLT to acquire skills in this regard as well as high-level research skills. On the other hand, the interactive skeleton of the F2F learning setting can have a parallel effect on higher-order thinking skills. These findings mirror those of previous studies that have put forward the comparison of two learning settings. McVay (2004) considered traditional classrooms as being ingrained in students' learning experiences, characterized by social presence and interactions. Likewise, it was posed that in order to enhance the quality and quantity of DE learning settings, increasing the interaction between instructors and students is a must (Carrillo & Flores, 2020).

Lastly, it is widely recognized in the literature that learners in F2F learning settings have higher negotiation and questioning skills (Colorado & Eberle, 2010), which is crucial to promote these skills within the DE learning context (Callister & Love, 2016).

In contrast to earlier findings, however, there are other studies in the literature in which no significant difference regarding the delivery modes of courses denoting partial similarity to the quantitative analysis findings of the current research. Larson and Sung (2009) conducted a study examining F2F, DE, and blended learning modes of delivery and found no significant difference among the learning settings. Likewise, within the scope of English language learning, Solak and Çakır (2014) compared the views of participants learning English in two different delivery modes. The findings revealed that no significant difference was found between e-learners and F2F learners in learning English.

Based on the prior research, it can be said that individuals experience a phase of resistance followed by adaptation when changes are implemented in established systems until they reach the required readiness. Readiness paves the way for changes in learners' behavior and is crucial for students to hold online readiness in order to effectively engage with distance education implementations (Engin, 2017). Therefore, it can be inferred that a balanced approach, considering the strengths and weaknesses of both F2F and DE learning settings might be crucial in designing effective education and particularly language education programs.

5.2.4. How do the F2F and DE learning settings affect prospective EFL teachers' (PEFLT) self-directed learning (SDL) skills? If so, in what ways?

Candy (1991) was one of the prominent scholars who acknowledged the differences in levels of SDL among learners across various settings or contexts. Therefore, another research question within the framework of the present study was about the impact of F2F and DE learning settings on the SDL skills of PEFLT. Questions posed to the participants mainly focused on two aspects; the first was to discern if the participants perceived that their chosen learning setting (F2F or DE) supported to cultivation of SDL skills, and the second was to pinpoint the particular learning setting, whether it be DE or F2F instruction, in which learners experienced a greater sense of SDL skills. These questions collectively provided a comprehensive understanding of participants' subjective encounters and beliefs concerning SDL skills across various

learning settings.

Based on the results, it was found that the development of SDL skills among participants is affected by the autonomy and interactive nature that is inherent in F2F learning settings. This yields similarity to the research conducted by Plews (2017), who explored the experiences of traditional and non-traditional learners in terms of SDL readiness within the online learning context. In Plews' comparative study, it was found that traditional learners described online context as an autonomous process with goals related to personal accomplishments whereas non-traditional learners viewed it as a flexible and accelerated format for achieving personal and professional objectives (2017). Nonetheless, it is important to note that a subset of participants emphasized the inherent nature of SDL skills, considering them as detached from external factors or specific learning settings. This perspective suggests a recognition among participants that SDL skills are inherent skills that go beyond the learning settings. Given the predominant focus of the literature on assessing SDL skills and exploring their connection to different variables, no study was found to address this finding.

Admitting that the F2F learning setting was found to contribute more to the PEFLT's SDL skills, the sense of responsibility and independence fostered in DE learning settings were stated as contributory to the SDL skills of individuals. This also accords with the earlier study carried out by Haidari et al. (2019) with EFL student teachers pointed out that the use of technology by EFL student teachers to engage in SDL skills not only has a positive effect on their linguistic knowledge and language skills but also fosters a sense of personal accountability for their own growth. When given an eye to the link between DE learning setting and SDL skills in this research, the flexibility offered by the learning setting and its structure that enables saving time, resources, and effort were identified as factors with a positive impact on their relationship. This result substantiates the idea of Song and Hill (2007) who suggested that an important benefit of online learning is its convenience and flexibility. Conversely, due to the possibility of lack of participation and procrastination factors were found to be negatively related to SDL skills. Consistently, it was noted that procrastination is more common in online learning settings due to its frequently flexible schedule (Elvers et al., 2003). Briefly, though F2F learning settings were recognized for their contribution to the SDL skills of the PEFLT in the present research, the cultivation of a sense of responsibility and independence in the DE learning setting was identified as a contributing factor.

In consequence, this research clarifies how SDL skills of PEFLT change in

relation to gender, GPA, and learning settings, and subsequently analyzes their perceptions of F2F and DE learning settings. Correspondingly, PEFLT demonstrate strong SDL skills in quantitative analyses and this level of SDL skills does not indicate a significant difference according to gender and GPA whereas there is a moderate yet significant difference favoring female participants in terms of the self-control sub-dimension. When the findings of the online open-ended questionnaire were examined, one unexpected finding was the fact that F2F learning settings contribute more to the development of SDL skills of PEFLT given the widespread status of the close relationship between DE learning settings and SDL skills in the literature. This preference signifies the recognition of unique advantages in F2F settings, including increased interactivity, motivation, self-discipline, and active participation, essential but limited in DE learning settings. It can be inferred that learners' prolonged exposure to traditional educational settings fosters familiarity, potentially facilitating more effective SDL skills development. While there is a lack of existing research on the concept of familiarity in educational settings, it is necessary to examine further the relationship between F2F and SDL skills.

5.3. Chapter Summary

In this chapter, the findings have been thoroughly discussed in connection with relevant studies in the field within the scope of prospective EFL teachers' (PEFLT) self-directed learning (SDL) skills and perception of DE and F2F learning settings. Furthermore, both similarities and differences in the results compared to previous research have been stressed for a more comprehensive understanding.

CHAPTER VI

CONCLUSION

6.1. Introduction

In this chapter, concluding remarks of the current study will be presented based on the overall findings. Along with that, pedagogical implications and recommendations that will shed light on further research will be shared.

6.2. Conclusions

This research set out to uncover the self-directed learning skills (SDL) of prospective EFL teachers (PEFLT) who embarked upon the department through DE or F2F learning settings based on the dynamics of GPA, gender, and learning settings, as well as participants' overall viewpoints on learning settings. Accordant with the main objective of the research, an explanatory mixed method design was employed, including an initial phase of quantitative data collection and analysis followed by a qualitative phase, which was aimed to achieve a well-grounded comprehension of the phenomena under investigation. Subsequently, responses to the following research questions were pursued;

Q1: To what extent, if any, do prospective EFL teachers (PEFLT) demonstrate self-directed learning skills (SDL) in their learning processes?

Q2: Are there any differences in the prospective EFL teachers' (PEFLT) self-directed learning skills (SDL) based on gender, learning setting, and GPA?

Q3: What are the prospective EFL teachers' (PEFLT) perceptions of F2F and DE learning settings?

Q4: How do the F2F and DE learning settings affect prospective EFL teachers' (PEFLT) self-directed learning (SDL) skills? If so, in what ways?

The primary aim of the first research question was to measure the SDL skills of PEFLT in both formal and informal learning settings, examining their ability to direct their own learning processes. Accordingly, descriptive statistics findings of the “Self-Directed Learning Skills Scale” developed by Aşkın and Demirel (2018) denoted positive results focusing on the high level of SDL skills with the highest level in the motivation sub-dimension, which might be attributed to various factors. For example, PEFLT driven

by intrinsic motivation and dedication to their professional growth might actively participate in SDL pursuits. Furthermore, a positive and supportive learning setting might also play a role in maintaining SDL skills among these individuals.

To further examine the first research question, the second research question sought to examine possible differences in the SDL skills of PEFLT concerning gender, learning settings, and GPA. The findings revealed that there were no significant gender-based differences in participants' SDL skills, and similarly, the GPA of the participants did not indicate a significant difference either. It is worthy of note that in contrast to the majority of the previous literature implying a connection between SDL skills and factors such as GPA, success rate, or academic performance, the SDL skills of the participants did not have any effect on their GPAs. On the other hand, a moderate significant difference was found between PEFLT's SDL skills and learning settings favoring, DE environments. In other words, participants in DE learning settings showed slightly higher mean scores than those in F2F learning settings. Thus, it can be concluded that individual characteristics motivation, and other external factors beyond the research's parameters might have an impact.

The third research question aimed to probe the perceptions of PEFLT with regard to F2F and DE learning settings, with a particular focus on advantages/disadvantages and skills development. To this extent, the participants highlighted a wide range of benefits associated with the F2F learning setting, placing special emphasis on the importance of social interaction in this setting. Significantly, the frequency of advantages in the F2F learning setting was balanced compared to the disadvantages recognized in DE learning settings, providing a comprehensive overview of the perceived advantages and disadvantages in both learning settings. When the status of skill development in PEFLT is taken into account, DE learning settings emerged as invaluable platforms that provide distinct opportunities, especially focusing on technology, research, and reading-writing skills. F2F learning settings were proved to be more efficient in developing a broad range of skills such as social interaction, speaking proficiency, and higher-order thinking skills. Therefore, it might be right to say that the demands of DE learning settings, necessitating technological proficiency and research skills, motivate participants to acquire competencies, while simultaneously, the interactive and collaborative nature of F2F learning settings seems to foster the parallel development of higher-order thinking skills.

The final research question aimed to reveal the effectiveness of the F2F and DE learning settings in cultivating SDL skills, enhancing the comprehension of the elements

influencing the educational experiences of PEFLT. The results revealed that the development of SDL skills in PEFLT is markedly shaped by the autonomy and interactive nature ingrained in the F2F learning setting. However, it is crucial to recognize that some individuals view SDL skills as separate from external factors or particular learning settings. While acknowledging the contribution of the F2F setting to SDL skills, it is worth mentioning that developing a sense of responsibility and independence in DE learning settings also plays a significant part in shaping individuals' SDL skills.

Consequently, it can be inferred that PEFLT show strong SDL skills driven by intrinsic motivation, individual characteristics, and the dynamic interplay between different learning settings. The findings highlight the need for tailored methods that recognize individual differences and utilize the specific advantages of diverse learning settings to develop well-rounded self-directed learners.

6.3. Pedagogical Implications

This research intended to reveal the SDL skills of PEFLT who set out upon the division through DE or F2F learning settings with a specific concentration on the interplay between GPA, gender, and learning settings while offering a detailed analysis of the pedagogical implications derived from these variables. Additionally, the study also aimed to gather participants' viewpoints on learning settings in order to provide insights into educational practices in EFL teacher training programs.

Findings have demonstrated positive outcomes concerning the SDL skills of PEFLT which might be connected to various factors, including intrinsic motivation, individual differences, and the learning settings. This combination of findings provides some support for the conceptual premise that in both learning settings, social interaction and active involvement have been identified as crucial factors highlighting the importance of promoting collaborative learning experiences in both settings. By building on that, Yang (2016) reinforces the conceptual premise by demonstrating the positive impact of guiding students to utilize online materials, promoting technological interactions, and incorporating online assessments in fostering SDL of English as a Foreign Language (EFL).

It is advised in the F2F learning setting to augment language exposure opportunities, focus on individual differences, and incorporate technology more easily into the curriculum. Recent research by Brown (2021) underscores the importance of

language exposure and individual differences in language learning, highlighting their crucial roles in shaping learners' linguistics skills and overall language development. Clearly, integrating these insights into educational practices can encourage a more inclusive and tailored learning climate.

Continued efforts are needed to make learning opportunities more diverse such as virtual reality simulations, online collaboration platforms, multimodal learning resources, reflective teaching portfolios, etc. On the other hand, it is highly recommended that both learning settings should place a priority on technological training to equip individuals with the necessary skills for the evolving landscape of language education. Such training has the capacity to empower PEFLT to harness the technology in their teaching practices, thereby increasing the overall quality of language education. Similarly, İspınar Akçayoğlu and Dişlen Dağgöl (2021) emphasized the importance of implementing essential technical precautions to mitigate the potential challenges, thereby ensuring the seamless continuation of educational processes. On the other hand, Luu (2022) pointed out that “for effective implementation of online learning, orientation courses about all aspects of online learning should be offered from the outset” (p.221). Furthermore, the need for exposure to ICT-integrated sample lessons conducted in F2F classroom settings by educational technology specialists has been emphasized (Hismanoğlu,2012).

This research also reveals how widespread the striking effect of inequality of opportunities in learning settings where language education is implemented. The inequality in educational settings not only affects individuals' prospects for fair participation but also reflects a systematic problem that greatly undermines the values of equitable access and inclusive learning. It is surely beyond doubt that ensuring equal opportunities in both learning settings is paramount including addressing potential disparities in resources, access to technology, and educational support. On the grounds of this, it is crucial to take steps to guarantee inclusive and fair educational policies, equal allocation of resources for all, and universal access to technology regardless of individual circumstances.

6.4. Recommendations for Further Research

As this research tried to examine the SDL skills of PEFLT based on gender, GPA, and learning settings along with their overall perceptions of these learning settings, recommendations have been put forward given the limitations of this study:

1. This research was carried out based on the convenience sampling method from 12 state universities in Türkiye. Therefore, it might be more convenient to conduct the study with a greater number of participants to enhance the generalizability of the results to a wide audience.
2. To expand the research scope, it is suggested to investigate and contrast the SDL skills of in-service EFL teachers which could offer valuable perspectives on the distinct dynamics and potential areas for improvement within this particular professional setting.
3. Considering the fact that this study utilized a scale and an online open-ended questionnaire as data collection tools, it is recommended that a course within the English Language Teaching undergraduate curriculum should be given in both F2F and DE learning settings, and SDL skills of individuals should be evaluated accordingly as a longitudinal study.
4. The participant profile in this study was individuals who began their English Language Teaching undergraduate program through F2F and DE learning settings. Since SDL skills are closely associated with DE learning settings in the literature, it could be beneficial to conduct a comparative study on individuals' digital literacy and SDL skills in further studies without a clear line in learning settings as in this study.

6.5. Chapter Summary

In this chapter, a comprehensive presentation of the research conclusion has been presented. Following this, pedagogical implications and recommendations for further research have been offered, aiming to contribute to the research domain.

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