T.C.

BAHÇEŞEHİR UNİVERSITY

GRADUATE SCHOOL OF EDUCATION

THE DEPARTMENT OF ENGLISH LANGUAGE TEACHING

FOSTERING WELL-BEING AND IMMUNITY AMONG IN-SERVICE HIGH SCHOOL ENGLISH LANGUAGE TEACHERS IN TURKEY: A QUASI-EXPERIMENTAL STUDY

PHD THESIS

FERHAT KARANFİL

İSTANBUL, 2023

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ABSTRACT

FOSTERING WELL-BEING AND IMMUNITY AMONG HIGH SCHOOL ENGLISH LANGUAGE TEACHERS IN TURKEY: A QUASI-EXPERIMENTAL STUDY

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Doctor of Philosophy Program in English Language Education

Supervisor: Assoc. Prof. Enisa MEDE

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The purpose of this study was to investigate well-being and immunity among high school English teachers and to identify the effects of an 8-week intervention programme. Participants were high school teachers working in İstanbul, a metropolitan city in Turkey. The data were collected from pre-post and delayed intervention scores and the qualitative data resources were semi-structured interviews, and learning diaries of participants. The results revealed that relationship, accomplishment, and engagement significantly predicted participants' well-being. Meaning and positive emotions were not predictors of wellbeing. For immunity, the qualitative results suggest that while all the significance values or coefficient sig values are smaller than .05, meaning that the prediction ability of the relevant subscales is significant(teaching self-efficacy, resilience, attitudes towards teaching, openness to experience, and classroom affectivity), the value for burnout was non-significant. Based on these findings, this study provides pedagogical implications and suggestions for integrating well-being and immunity into teacher-education programs for in-service teachers.

Keywords: Teacher Well-being, Teaching Immunity, Coping Strategies, Teacher Emotions, Positive Psychology

ÖZET

TÜRKİYE'DEKİ HİZMET İÇİ LİSE İNGİLİZCE ÖĞRETMENLERİNİN İYİ OLMA HALİNİN VE ÖĞRETME BAĞIŞIKLIĞIN ARTIRILMASI: YARI DENEYSEL BİR ÇALIŞMA

Karanfil, Ferhat

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Bu çalışmanın amacı Türkiye'de lise öğretmenlerinde iyilik hali ve öğretmen bağışıklığın araştırılmasıdır. Katılımcılar Türkiye'de devlet okulları bağlamında lise öğretmenleridir. Veriler, müdahale öncesi ve sonrası müdahale puanları ile toplanmıştır ve nitel veri kaynakları, yarı yapılandırılmış görüşmeler, katılımcıların öğrenme günlükleridir. Sonuçlar, ilişki, başarı ve bağlılığın katılımcıların refahını önemli ölçüde yordadığını ortaya koydu. Anlam ve olumlu duygular, refahın/iyi olma halinin yordayıcıları değildir. Bağışıklık için nitel sonuçlar, tüm anlamlılık değerlerinin veya katsayı anlamlılık değerlerinin .05'ten küçük olduğunu, yani ilgili alt ölçeklerin yordama yeteneğinin anlamlı olduğunu (öğretme özyeterliği, dayanıklılık, öğretmeye yönelik tutumlar, öğrenmeye açıklık,sınıf duygulanımı) göstermektedir. Fakat, bulgular öğretme bağışıklığı kapsamında tükenmişlik değerini önemsiz olduğunu göstermiştir. Bu bulgulara dayanarak, çalışma, hizmet içi öğretmenler için öğretmen eğitimi programlarına refah ve bağışıklığın entegre edilmesi için pedagojik çıkarımlar ve öneriler sunmaktadır.

Anahtar Kelimeler: Öğretmen İyi Oluşu, Öğretim Bağışıklığı, Başa Çıkma Stratejileri, Öğretmen Duyguları, Pozitif Psikoloji

To my precious family….

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My family members are always keen to see me as a PhD holder, and today is the day, but my father is not among us, and I hope he is proud of me, and he feels my heartfelt success.

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CDST	The complexity/dynamic systems theory
CPD	Continuing Professional Development
CT	Complexity Theory
ELL	English Language Learning
ELT	English Language Teaching
FA	Factor Analysis
FLT	Foreign Language Teaching
PCA	Principle component analysis
PERMA	Positive Emotions, Engagement, Relationships, Meaning, and Accomplishment.

Chapter 1
Introduction

This opening chapter begins with a summary of the situation by providing a theoretical overview, followed by a brief explanation of the significance of teacher immunity and teacher well-being. It then describes the overarching goal of the study, its importance, and the research topics to be examined. Finally, definitions of the important words covered in the study are provided.

1.1 Theoretical Overview

The idea of "language teacher immunity" is relatively new and serves as a way for language teachers to defend themselves against various challenges in their fields (Hiver & Dörnyei, 2017; Rahmati et al., 2019). This immunity acts as a shield, protecting English teachers from the high levels of chaos and complexity that may occur in educational settings. Research on language teacher immunity shows that it is positively linked to positive teacher-related factors (e.g., Haseli Songhori et al., 2018; Hiver, 2017; Li, 2022; Rahimpour et al., 2020). The teacher-related factors have been investigated within theories. The well-being construct is based on the theory of Positive emotions, Engagement, Relationships, Meaning, and Accomplishment (hereafter, PERMA) and teaching immunity gets roots in complexity/dynamic systems theory (hereafter, CDST).

Previous research indicates that defining the notion of psychological well-being is a contentious dispute (Dagenais-Desmarais & Savoie, 2012). When scholars describe well-being, they generally make use of the idea that there are two main splits in theoretical standpoints, with one perspective converging hedonic and the other on eudemonic perspectives (Ryan and Deci, 2001). Hedonic perspectives emphasize the experience of happiness and the main locus in this area is "subjective well-being" (SWB, hereafter) which comprises the individual's perception of balance between positive/ negative emotions and their general sense of life satisfaction. This point of view is based on a personal subjective sense of happiness. SWB is comprised of levels of pleasant affect, lack of unpleasant experience, and life satisfaction and includes 'emotional reactions to their events, moods, and judgements they form about their life satisfaction, fulfilment, and satisfaction with domains such as family and work life. (Diener et al., 2003).

The eudemonic view of well-being emphasizes self-actualization and the capacity to draw a sense of purpose or meaning from one's life (Ryan & Deci, 2001). In practice, well-being is likely to represent an integration of 'feeling good' and 'living well' rather than being either hedonic or eudemonic (finding meaning and purpose). The Positive Emotions, Engagement, Relationships, Meaning, and Accomplishment (PERMA) model of flourishing established by Seligman is a valuable model that has also been utilized in English Language Teaching (ELT) research (e.g., MacIntyre et al. 2020) and incorporates features of both views (eudaimonic and hedonic). As previously stated, the model views well-being as multidimensional, considering both pleasant effects and life with a sense of meaning. The concept also incorporates well-being, as it develops from the context of social connections, extending well-being beyond an entirely individualistic approach. However, this model focuses extensively on the subjective personal-psychological sense of well-being and pays little attention to systemic or contextual factors as sub-dimensions of well-being. The current study will adopt immunity formation as the basis for teachers' coping strategies. How systems adapt to their environment to sustain, and function is a compelling involvement in the field of language learning from complex perspectives (Larsen-Freeman, 2012). Because CT (Complexity theory) provides rigorous assistance in thinking and theorizing about the forces of change in social and human systems, an increasing number of studies have used the CT framework to investigate second language learning phenomena in ways that prioritize adaptive and developmental processes across multiple timescales (Dörnyei et al., 2007).

In conclusion, the notions of self-organization and the emergence of noticeable and valuable outcomes or configurations that are coherent at a macro level from a CT framework inform our developmental blueprint. Existing empirical data reveal that the dynamic development pattern comprises four major phases: triggering, connecting, realignment, and stabilization (Hiver, 2015). These phases are not within the current scope of the study, but further information may be gathered at (Hiver, 2015).

1.2 Statement of the Problem

One of the most important components of human life is education, which is always evolving. Since it demands ongoing change, it is essential in assisting people in achieving both their professional and personal life goals. Education is especially important for those in the teaching profession, as good teachers and well-being are the

most important factors in guaranteeing student success (Davis & Higdon, 2008). Given another important focus is the quality of instruction (Woolfolk-Hoy, 2008), teachers' current state of well-being and immunity moulds the outcomes of education such as students' success or the quality of instruction.

Teachers will be able to successfully train their learners if they may continue to expand their knowledge, abilities, and competence. According to Mercer (2020), the teaching profession has historically been one that is marked by high levels of stress, which lowers teacher well-being. According to studies of (Golombek & Doran, 2014; King & Ng, 2018; Talbot & Mercer, 2018), language teaching has been characterized as a career requiring more emotional investment and labour to teach others because of the priority placed on relationships with others and the incorporation of personally significant information and identities (Talbot & Mercer, 2018). Teachers' emotional investment in teaching start in their first year as educators.

English teachers may become more knowledgeable about their students and their characteristics, educational contexts, curricula, educational aims, purposes, and values as well as the philosophical and historical issues unique to their new setting when they start teaching in a new setting. Ayan (2018) enacted a study with newly-appointed teachers to the Ministry of Education and they alluded that teachers are often appointed to 4^{th,} 5$^{th,\ and}$ 6th service areas of Turkey which are more under-privileged than the service areas of 1st, 2nd, and 3rd service areas. Working in the 4th, 5th, and 6th service areas often brings challenges to teachers who work away from their families. Solak and Bayar (2015) cited Foreign Language Teaching (FLT) as a challenge and listed course books, local curriculum, and lack of motivation as detrimental factors for not learning English. The weekly course hours in the current curriculum have remained identical at 6 hours for grades 9 and 4 hours for the 10th to 12th grades (Kırkgöz, 2007), which may not be enough time for instruction to become a proficient speaker of English and it may bring about negative emotions to English Language Learning (ELL). Vicariously experiencing terrible experiences of their English learners may also cause English language teachers to develop emotional instability, mental tiredness, compassion fatigue, and/or secondary traumatic stress (O'Loughlin & Custodio, 2021).

Together with teacher-oriented issues, there may be countless issues in teaching FLT. For example, Olayemi (2014) explored the difficulties of teaching English in Nigeria from the instructors' perspective. He uncovered that there were numerous encounters in English teaching in K12 schools, including congested classrooms, infrastructure and teacher education programs that need to improve, lower attitudes toward teachers, low education budgets, L1 interference and students' critical attitudes toward learning English. To survive in their profession, teachers may need to develop resilience, immunity, and well-being to stay mentally and physically healthy and achieve life goals.

Waterman (2008) identified the eudaimonic perspective as relating it to finding meaning and purpose in one's life and professional life. Well-being in professional life may lead to self-actualization and a more satisfactory life. Previous studies (Mede, 2009; Özdemir &Demir, 2019) identified personal variables with a focus on self-actualization and self-efficacy; if there is an imbalance in private and professional life, these domains may affect each other negatively. In addition to the personal factors that affect the well-being of language factors, institutional factors play a crucial role in the well-being of language teachers (Mercer et al., 2022). The nature of ELT and institutional expectations are changing rapidly, and the spectrum of ELT requires high intercultural demands, potential challenges to the sense of self, threat of lower linguistic self-efficacy, energy-intense methodologies, high emotional labour, unstable teaching circumstances in the private sector, a dearth of a united front or union, and a low public eye on teachers' prestige (Nayernia & Babayan, 2019).To meet the expectations of teachers working in private schools, they need to be supported and oriented at the beginning of the year.

In brief, the support that high school English teachers receive from their institutions may help their professional growth, emotional well-being, and socialization within the school. High school English teachers may require more support than other teachers at other levels due to the unique challenges (competitive nature of success, unmotivated learners, anxiety for university entrance exams) and the demands they face in their roles. High school English teachers are responsible for preparing students for graduation and higher education, which often require a significant amount of curriculum development, assessment, and student support. Additionally, high school students may have more complex social and emotional

needs, which can be emotionally taxing for teachers (DemirAyaz et al., 2019). High school teachers also face high expectations from their parents, students, and administrators, which can contribute to job-related stress and burnout. Therefore, providing high school teachers with appropriate support, resources, and professional development opportunities can help them better meet their students' needs and achieve professional and personal fulfilment in their roles. They can achieve professional fulfilment by attending CPDs tailored to foster their well-being and immunity.

1.3 Purpose of the Study

The present study aimed to explore the effects of teacher immunity and attempt to predict whether teachers' immunity could predict well-being. Next, the present study explored whether an 8-week-long intervention program would affect teachers' level of immunity and well-being. The qualitative phase of data collection will also seek reflections on teachers' immunity and well-being. The current study aimed to uncover immunity and well-being among high school English teachers in Turkey and an intervention program based on Williams et al. (2015), the participating teachers' needs, and whether the intervention would change levels of well-being and immunity Along with the aims, as well as unveil the interaction of factors in immunity and well-being.

This study aimed to investigate the levels of teaching immunity and well-being among English-language high school teachers in Turkey. The first research question (RQ1) explored the level of teaching immunity and well-being using descriptive statistics. The second and third research questions (RQ2 and RQ3) examined whether significant differences exist in the immunity and well-being of high school teachers in the pre- and post-training phases. The fourth research question (RQ4) aims to identify the factors, such as teaching self-efficacy, burnout, resilience, attitudes towards teaching, openness to experience, and classroom affectivity, that impact the development of immunity of English language high school teachers, using regression analysis. The fifth research question (RQ5) aims to identify the factors such as positive emotions, engagement, relationships, meaning, and accomplishment that impact the well-being of English language high school teachers. The sixth research question (RQ6) explored the reflections of English language teachers on their well-being in the pre- and post-training stages. Finally, the seventh research question (RQ7) examined the relationship between teacher immunity and well-being in English language

teachers. A range of quantitative and qualitative research methods will be used to provide a comprehensive understanding of the factors influencing the immunity and well-being of English language high school teachers in Turkey. Qualitative data will be used to investigate the underlying factors contributing to the findings of the quantitative analysis.

1.4 Research Questions

The following research questions were addressed to meet the objectives of this study.

RQ1: What is the level of well-being of English teachers in Turkey?

RQ2: What is the relationship between teacher immunity and well-being in English language teachers?

RQ3: What factors (teaching self-efficacy, burnout, resilience, attitudes towards teaching, openness to experience, and classroom affectivity) have an impact on the development of immunity of English language high school teachers?

RQ4: What factors (positive emotions, engagement, relationships, meaning and accomplishment) have an impact on the well-being of English language high school teachers?

RQ5: Are there significant differences in the immunity of high school teachers in the pre-and post-training phases?

RQ6: Are there significant differences in the well-being of high school teachers in the pre-and post-delayed training phases?

RQ7: What are English language teachers' reflections on their well-being in the pre- and post-training stages?

1.5 Significance of the Study

As indicated in a report by the World Health Organization (WHO, 2020), there has been a notable increase in stress levels among adolescents and young adults, along with a rising prevalence of mental health disorders among school children. Given this context, teachers may play a pivotal role in assisting students prioritizing their physical and mental well-being. To fulfil this role effectively, teachers should receive appropriate training that equips them with strategies to maintain their immunity and

well-being. This parallel can be drawn to safety instructions on an aeroplane, where parents are instructed to secure their own oxygen masks before assisting their children. By prioritizing their own well-being, teachers can be better positioned to support and guide students in navigating their own health challenges. It is critical that instructors continue to expand their knowledge, self-care skills, abilities, and competencies to be successful in their subjective and professional lives (De Costa et al., 2020).

With growing rates of depression, stress, and other mental health concerns in all cultures, but notably among adolescents and teachers, there may be an urgent need for preventative measures to control the distressing trend in all fields of education, notably in ELT. With the recent inclusion of student well-being in the OECD 2013 (Organisation for Economic Co-Operation and Development) PISA 2018 (Programme for International Student Assessment) profiles and the UN (United Nations), future objectives for Edu2030, the academic goals of many interdisciplinary curricula worldwide now include learner well-being as pertinent for all disciplines. In that sense, effective training programs on teacher well-being are necessary because they play a vital role in the professional enhancement of teachers because teacher knowledge is an "ongoing socially mediated process–simultaneously subjective and objective...affected by power relations" (Gregson, 2013, p. 167). Additionally, according to Johnson and Golombek (2016), CPD programs are crucial for emotionally supporting teachers since instructors frequently suffer emotional discord when developing new outlooks and meanings in new environments (Oxford, 2020). It is not standard practice to conduct induction programs for the instructors, particularly at higher education institutions and K-12 (Kindergarten to 12th grade) public schools, with the expectation that experience will be sufficient to overcome the problematic obscurities of the new settings and improve professionally.

Regarding the aforementioned points, this study is significant as there is no profound research in the literature on teacher immunity. Research so far has focused mostly on the impacts of CPD programs on the teaching practices of beginning teachers or student achievement such as (Tanış &Dikilitaş, 2018). Hence, this study might contribute to the scant body of literature on in-service programs for practising teachers in Turkey in terms of their well-being levels and immunity because it may provide exhaustive documentation on the features and effectiveness of a well-being program for those practitioners.

To the knowledge of the researcher, there is a scarcity of research on teacher immunity in Turkey. To the best of our knowledge, only two studies have been carried out to date. A qualitative study was conducted by Ordem (2017). The researcher carried out a longitudinal investigation of a single case of immunity in language teachers. It sought to determine what kind of immunity a teacher exposed to disturbance would develop and what motivational course they would take. The results unveiled that the teachers had maladaptive, or negative, immunity. Due to regular feedback on their prior experiences, great self-efficacy, and a perfect classroom environment, the participants displayed maladaptive behaviours. Teachers' opposition to the development of a novel technique or strategy was another factor in this form of immunity

Considering the importance of teacher immunity, this study will help high school teachers to identify the factors fostering their immunity and well-being and provide a model for administrators or policymakers to plan and implement an immunity-fostering CPD for English teachers (Doğan & Kırkgöz, 2022). Furthermore, previous research on teacher education revealed the characteristics of a successful teacher training program as well as their effects on instructors' teaching practices and emotions. As a result, this study may be useful to administrators or managers who want to make necessary adjustments, additions, and deletions to their existing teacher training programs, in which emotional aspects may be absent. It is anticipated that such programs would ultimately be made available or required for instructors in schools since, in addition to the benefits for individual teachers, they are also important for schools for two primary reasons. First, if teachers are well-trained and feel well, they may be able to teach more efficiently while second keeping their immunity and well-being in mind which may lead to commendable student achievements.

1.6 Definitions

English as a foreign language (EFL): Teaching EFL is teaching "English as a foreign language for learners whose community English is not the language of communication" (Thornbury, 2006, p. 74). English learners may be learning English for academic purposes or other reasons, such as travelling or dealing with business.

Burnout: A psychological syndrome resulting from the experience of lengthy persistent work-related anxiety (Maslach and Jackson, 1981).

Emotions: American Psychological Association (APA), emotion is defined as "a complex reaction pattern, involving experiential, behavioural and physiological elements.".

Hardiness: A psychological trait intended to mitigate the negative consequences of stress on performance (Maddi, 2004).

Buoyancy: Individuals' self-perceptions about their capacity to successfully face routine anxieties (Martin and Marsh, 2008).

K-12: Education starting from kindergarten to 12th grade (Murphy & Rodríguez Manzanares, 2009).

Resilience: The ability to rebound from misfortune or continue good functioning in the face of adversity (Masten, 2001).

PERMA: The PERMA is a model of well-being developed by Martin Seligman. The model identifies five key elements of well-being: Positive Emotions, Engagement, Relationships, Meaning, and Accomplishment (MacIntyre et al., 2020).

Well-being: A sense of happiness, satisfaction and meaning that emerges from the dynamic interchange of personal characteristics and socio-contextual properties (Mercer, 2021).

Immunity: A robust shield armouring system that emerges as a response to threats and allows teachers to maintain professional balance and instructional effectiveness (Hiver & Dörnyei, 2017).

Chapter 2
Literature Review

2.1 Introduction

This chapter will focus on well-being first by describing its manifestation in mainstream education and then in English language teaching by providing ample literature making connections among well-being and its sub-domains. Likewise, the literature review on teacher immunity will be presented. Secondly, the connections between teacher immunity and ELT will be provided, exhibiting the studies which scrutinise well-being and immunity

2.1.1 Well-Being in education. For the last ten years of educational research, scholars have begun teaching and researching positive psychology (PP, hereafter). Lake (2013), the first researcher to refer to PP in language acquisition, highlighted the importance of positive emotions in language acquisition and any teaching and learning context. An earlier PP theory of Fredrickson suggested positive emotions. According to Fredrickson's (2013) broaden-and-build theory of positive emotions, positive emotional experiences broaden people's momentary thought-action repertoires, which in turn serve to build their enduring personal resources, ranging from physical and intellectual resources to social and psychological resources. These extra resources promote accomplishment, personal improvement, and a "successful existence," which leads to more happy feelings and a self-reinforcing upward cycle (Fredrickson, 2001). Although different conceptualizations exist, the researcher agrees with The American Psychological Association's (APA) definition of well-being as "a state of happiness and contentment, with low levels of distress, overall good physical and mental health outlook, or good quality of life" (APA Dictionary of Psychology, 2020, p.1). Therefore, in a meta-analysis, Lyubomirsky et al. (2005) looked over 225 empirical research that looked at the impact of Subjective Well-Being (SWB) and particular components of SWB on various aspects of life. He unveiled that people with a high level of well-being, for example, live longer (Veenhoven, 2008), have a more efficient immune system (Barak, 2006), are more efficient and successful at work (Achor, 2010), are more creative (Baas et al., 2008), and have more versatile social relationships (Rodrguez-Pose and von Berlepsch, 2014). High SWB is thus not only important for people's physical and psychological health but also for their personal

development and performance at work and in life. Subjective well-being encompasses the following elements: a) life evaluation – a reflective assessment of a person's life or some specific aspect of it; b) affect – particular feelings or emotional states; and c) eudemonia – a sense of meaning and purpose in life, or good psychological functioning (OECD, 2013[69]).

Kunter et al., (2013) has shown, in particular, that the emotional well-being (here, excitement for teaching) of mathematics instructors explains improvements in mathematical achievement and students' love of mathematics. Furthermore, positive affect is linked to intrinsic motivation and the ideal image of the "passionate teacher," who is particularly adept at engaging and encouraging his or her learners to maximize their potential (Kunter et al., 2011).

More recently, Buonomo et al. (2019) discovered that positive emotions toward students partially mitigate the detrimental effect of negative emotions toward students on teachers' self-efficacy, which is a significant antecedent of teachers' professional performance and a vulnerability factor against teachers' ill-being (Zee & Koomen, 2016). Thus, the findings provide convincing evidence that SWB is associated with a wide range of desirable outcomes that are also extremely important to the educational system and teaching profession. According to general and teacher-specific findings, enhancing teachers' SWB should help to improve their health and have a favourable influence on the teaching-learning processes in schools (see also Gray et al., 2017). Last but not least, professional well-being has other components for other researchers. Aelterman et al. (2007) identified six components of professional well-being: the capacity to build relationships with families, support from colleagues, self-efficacy beliefs, decreased workload, a creative point of view that is constructive, and encouragement from the school principal. The following figure displays the determinant factors of teacher well-being in Aelterman et al.'s (2007) model.

Figure 1. Determinants Factors of General Professional Well-Being in Elementary Education. (Aelterman et al., 2007).

In the context of elementary education, the six key aspects of well-being have a positive impact on teachers' overall professional well-being. Among these aspects, self-efficacy emerges as the most influential and directly affects other factors as well. It serves as a mediator that influences various aspects of wellbeing.

In Aelterman et al. model (2007) The second most significant factor is the "lower pressure of work." When teachers experience reduced work pressure, it has a strong positive effect on their well-being. The effects of colleague support, attitude towards innovations, and the relationship with parents, while still relevant, are comparatively weaker and partly influence well-being through their positive impact on self-efficacy. Notably, having a positive attitude towards innovation leads to a perception of lower work pressure, thus exerting a favourable influence.

The extent to which teachers receive support from their principals also significantly, albeit indirectly, affects their general well-being. Feeling supported by their principals plays a crucial role in fostering a more positive relationship with colleagues, perceiving a positive relationship with parents, and experiencing lower work pressure in elementary education settings. Collectively, self-efficacy, perceived work pressure, principal support, colleague support, attitude towards innovation, and the relationship with parents account for approximately 54% of the variance in teacher well-being in the Aelterman et al. (2007) model.

To wrap up, the teaching profession and the numerous facets of the educational system are significantly impacted by SWB. Enhancing teachers' SWB may improve health outcomes and have a favourable impact on teaching-learning processes in schools, according to general and teacher-specific research. Schools may establish an atmosphere that supports good teacher-student interactions, successful teaching strategies, and general systemic well-being by prioritizing educators' well-being. Supporting teachers' SWB has advantages for personal reasons, as well as the overall quality of education and the growth of students.

2.1.2 Situating Teacher Immunity in English Language Teaching. Rapid changes such as a transition to emergency remote teaching (ERT) or natural disasters affect the teacher's well-being negatively (Ozamiz et al.,2021). When English teachers require support, administrators and school psychologists should give them positive behavioural methods, which appear to be crucial for the teacher to survive when they encounter challenging conditions and their teaching immunity decreases which may lead to feeling burnout or even worn-out (Kangas-Dick&O'Shaughnessy, 2020). Burnout is observed to occur as a consequence of persistent engagement in activities without adequate recuperation, leading to detrimental effects on one's well-being. When individuals become "worn out" due to prolonged physical or mental exertion, it signifies a need for rest. The need arises from the recognition that human bodies are inherently designed to undergo cycles of activity and recovery to maintain optimal functioning. Complexity/dynamic systems theory (CDST), which has a self-organization process as one of its guiding principles, is the foundation of a unique concept known as teacher immunity. A theory of change, evolution, and adaptation known as CDST analyses how cooperative and competitive behaviours can coexist to ensure survival (Morrison, 2002). According to this hypothesis, there is always a dynamic and cyclical link between a living thing and its environment, which frequently alters one another. The organism and its identity are prone to change as a result of the networks and relationships they have within the context. The milieu and its constituent elements interact dynamically to produce new realities and associations (Morrison, 2002).

The majority of people believe that identity is a constant (Luyckx et al., 2011). However, it is also dynamic by nature, because it can be described as experienced and relational with the encompassment that we are in. The truth is that identity is malleable

and may most definitely change over time, frequently on a regular basis, even if only slightly (Beijaard et al., 2004). As teachers depend on the factors in our immediate environment, our identity, teaching beliefs, and immunity levels (armouring system) change across the years of service. Therefore, teacher identification must be viewed as an ongoing process; while its roots are in one's apprenticeship of observation; its future development is in no way deterministically predetermined (Watson, 2006). Teacher immunity, like biological immunity, can have severe repercussions if it develops into a maladaptive form linked with a rigid and conservative practice as well as a general aversion to a methodological paradigm shift (Hiver & Dörnyei, 2017). However, teaching immunity is prone to experience the *incubation effect* refers to the delay that can occur between initiating the implementation of an intervention and the emergence of its effect (Joe, Hiver, & Al-Hoorie, 2017 p.2).

Language teacher immunity may be properly understood by investigating comparable notions, such as teacher effectiveness, which play an important role in the establishment of teacher immunity. Teacher efficacy, in broad terms, refers to instructors' self-confidence and beliefs in their skills to manage and create the specified learning outcomes (Tschannen-Moran & Woolfolk Hoy, 2001). Consequently, teacher efficacy can be regarded as a measure of instructors' competency and passion for teaching (Silverman & Davis, 2009). Teachers with a high sense of self-efficacy may perform better in the classroom and be more satisfied with their job. Teacher efficacy, on the other hand, has been found to have a strong association with motivation (Sevimel & Subaşı, 2018). Thus, we may infer that motivation influences teachers' self-efficacy). Low self-efficacy among teachers can lead to a variety of unfavourable situations, including difficulties in the classroom, a decline in job satisfaction, and stress brought about by professional-related concerns (Betoret, 2006). As a result, teachers' self-efficacy may affect their classroom practices, satisfaction with work, and well-being. In the Turkish context, only two articles and one thesis were found in the databases regarding teacher immunity. Some information is provided below regarding the article and the thesis.

Additionally, Ahmadi et al. (2020) emphasized that gender played a crucial significance, with female individuals immunized more effectively than male participants. Considering the importance of teaching experience, it was discovered that as EFL teachers approached the end of their careers, their immunity shifted to a more

fixed/fossilised and unfavourable one. The findings also revealed that participants of various age groups may have had various types of immunity.

In a recent study, Li (2021) explored well-being, and identified productive (i.e., positive) immunity type was dominant among the prospective EFL teachers. It was also concluded that teacher immunity is a dynamic construct that can influence almost everything that teachers do in their profession. The findings reported that though most teachers start teaching with a positive immunity type, their immunity levels may change as they undergo different experiences. Using a questionnaire and a semi-structured interview, Maghsoudi (2021) attempted to determine the most common form of teacher immunity in Arak, Iran. The MAXQDA, ANOVA, and t-test results revealed that teacher immunity is a dynamic concept that can impact practically everything teachers undertake in their line of work, such as changing schools, course materials, and changes in the school manager.

In another recent study that was initiated by Gooran et al, (2022) on online teaching. The qualitative data analysis showed that the changes in teachers' immunity were mainly due to familiarity with online teaching, scepticism of online learning, and limited student participation. Student participation and familiarity with teaching environments were deemed to be crucial. Finally, Namaziandost et al, (2022) carried out a study using path analysis which documented that the EFL teachers' reflective teaching was significantly correlated with ER (Emotion Regulation) and immunity. The gathered findings indicated that the EFL teachers' ER was closely related to immunity. The findings underscored the significance of incorporating reflective approaches, emotion regulatory strategies, and immune enhancement into teacher development programs. In a recent project, Wang et al. (2022) ran the project regarding the psychological health and job satisfaction of Asian EFL teachers have a favourable impact on their resistance. The results revealed that in Asia, psychological well-being was a better predictor of teacher immunity than work involvement. As addressed in the context of positive psychology (PP), the obtained results reported that the necessity for language teachers to work in a psychologically healthy atmosphere in order to remain dedicated to their careers and resistant to their challenges.

Considering the Turkish context, Saydam (2019) conducted a recent study of the immune levels of language teachers with university instructors. A series of investigations with instructors was carried out at a public university in Turkey to

examine the immunity types and characteristics of language teachers. The data were collected from 187 participants (168 female,19 male). According to the data analysis, age had little effect on teachers' immunity levels, but it had a considerably greater effect on coping mechanisms. The academic activities teachers pursue affect their attitudes towards students and their profession in a higher education context.

A study that exhibited a correlation between the English Prep School instructors' teacher retention rates and their immunity types as language teachers was conducted by Meç (2021). Additionally, a substantial distinction was discovered between the immunity types of language teachers and several dependent variables. The relationship between teacher attrition and language teachers' immunity is moderately negative. Finally, the results suggest that the vast majority of teachers felt that instructors who have acquired maladaptive immunity should not continue teaching.

In conclusion, the research so far has emphasized that most EFL teachers conduct their teaching in a positively immunized way and develop further coping mechanisms during the process of gaining experience. Studies in the Asian context have revealed that immunity is a better predictor of the work involvement of a teacher than well-being. ER plays a suggestive role in language teachers' reflection and immunity. As a novel research domain, studies on immunity may yield sizable results in positive psychology.

2.1.3 Situating well-being in English language teaching. The world's prevalence of mental and emotional health problems, such as depression, anxiety, and social isolation, has increased as a result of the events that occurred globally in the 21st century, particularly during its second decade (OECD,2023; OECD,2022) due to wars in Ukraine and Syria. These concerns, which were exacerbated by the COVID-19 pandemic (OECD,2020a), are bringing to the attention of policymakers, academics, and other stakeholders in the field of education the significance of well-being in classrooms and learning (Mercer, 2021). On the other hand, the number of academic articles concentrating on the welfare of teachers, particularly English language teachers, has been on the rise. (Dewaele et al., 2018; Mercer, 2020, 2021). The history of the language education field's concentration on instruction and academics, which frequently places affective and socio-emotional issues on the periphery, may be the cause for the lack of attention given to English language instructors' well-being. In a qualitative investigation, Mercer et al. (2022) carried out a study to find out the well-

being of language teachers in the workplace. The data were collected through semi-structured interviews with 15 language teachers. They examined the institutional and personal factors that contributed to their perceptions of well-being. The results of the study revealed five main themes: workplace culture, purpose, language teacher status, social relationships, and physical well-being. The results showed that well-being was not a personal experience but a socially determined phenomenon

According to previous studies, the well-being of English language teachers has a direct impact on their effectiveness, teaching techniques, classroom atmosphere, teacher-student interactions, and students' well-being and performance, to mention a few (Dewaele et al., 2018; Greenier et al., 2021; MacIntyre et al., 2020). Simply put, teacher well-being influences teacher performance in the same way as teacher training and knowledge.

Specifically, well-being is related to psychological dimensions and the determining factors teachers experience. The figure below is adapted from Celestine (2021), and it exhibits the determining factors of well-being:

Psychological Dimension	**Determining Factors**
Self-acceptance	-Positive feelings about the past. -Acknowledging and accepting positive and not-so-positive qualities. -Positive attitude towards self
Positive relations with others	-Warm, satisfying, trusting relationships -Concern for the welfare of others. -Capacity for empathy, affection, and intimacy. -Understanding of give-and-take.
Autonomy	-Self-determination and independence -Ability to resist social pressure. -Capacity to regulate behaviour. - Self-evaluation based on personal values.
Environmental Mastery	-Sense of mastery and competence. -Ability to control activities and leverage opportunities. -Capacity to choose or create a context that suits needs or values
Purpose in life	-Having goals and a sense of direction. -Feeling there is meaning to the present and past life. -Believing in purpose and objectives for living
Personal growth	-Sense that you are growing and expanding. -Open to new experiences. -Realisation of someone’s potential -Change that reflects greater self-knowledge.

Figure 2. Six Dimensions of Well-being (Celestine, 2021).

Well-being is a crucial aspect of English language teaching, as it not only impacts learners' academic performance, but also their overall quality of life. The concept of well-being encompasses both physical and mental health, and it is widely acknowledged that positive mental health (Harding et al.,2019) has a direct correlation with the academic success of learners and teachers. Well-being includes many factors, starting with self-acceptance and positive and meaningful relationships with others. Therefore, English language teachers must create a supportive and inclusive learning environment that prioritizes their own and their students' well-being. Such an environment can be fostered by promoting a positive atmosphere in the classroom, encouraging communication and collaboration, and addressing issues that may arise. When teachers are in environmental mastery(ability to control and leverage opportunities), they can look for ways for personal growth and purposeful life. To sum up, English language teachers can incorporate well-being practices such as mindfulness practices and stress reduction techniques into their lessons to help their students cope with the challenges of learning a new language. By prioritizing well-being in English language teaching, teachers can not only enhance their students' academic performance but also promote a healthy and positive approach to language learning that can be sustained throughout their lives and bring success to their professional lives.

2.2 Domains of Teaching Immunity

Immunity is derived from the Latin immunis and refers to the state of resistance to something (as in viral immunity) or exemption from something (as in diplomatic or judicial immunity) (Chiappelli & Liu, 2000). Immunity can be widely described throughout these domains as a defense system that protects the organism against the negative, unwanted, or harmful impact of the external environment. The most common concept of immunity is biological, generally associated with the area of medicine, in which the system responsible for defending the body from external attacks and battling infections is specified.

According to Hiver & Dörnyei (2017), teacher immunity can be divided into two categories: productive immunity and maladaptive immunity. Teachers are shielded from stress, failure, exhaustion, and similar issues by the former as a type of armour. In contrast, the former causes teaching methods to become calcified (Hiver and Dörnyei, 2017). Maladaptive immunity may be brought on by a variety of things,

including avoidance-focused behaviours and resistance to change or innovation (Bullough and Hall-Kenyon, 2012; Xu, 2018). Influences instructors' ways of thinking, how they behave in social situations, and how they perceive themselves as professionals.

Hiver (2019) identified the major immunity types. In his study, the three main global types and two halfway types were chosen as superordinates of actual teacher immunity outcomes: a1) partially immunized teachers (i.e., those who had developed particular elements of the malleable and salubrious form of teacher immunity);b) maladaptively immunized teachers (i.e., individuals with a rigorous and ineffective sort of teacher immunity,);b1) partially maldaptively immunized teachers (i.e., those who had developed partial aspects of the detrimental maladaptive form of teacher immunity);c) immunocompromised teachers (i.e. individuals who lack teacher immunity).

Although there are other ways of classifying the immunity types for other researchers, Hiver (2017, p.3) termed the *language teacher immunity*, and his work is widely recognised among language teachers and positive psychology researchers. Numerous synonyms for immunity have also been proposed, including coping (i.e., methods used to reduce or avoid stressors), hardiness (i.e., a personality trait that reduces the psychological effects of stress on one's performance), resilience (i.e., the capacity to bounce back from traumatic experiences or adversities), adaptability (i.e., the capacity to change one's behaviour to fit changing circumstances), and buoyancy (i.e., one's perception to manage the peculiarities in life such as stressors (Parker & Martin, 2009, p.9).

To summarise, the domains of immunity such as productive and maladaptive with the constraints (partially) can be used as a framework to understand the different ways in which language teachers may respond to stressors and challenges in their professional lives. Language teachers need to develop and maintain their immunity to promote their well-being and effectively support their students. This may involve developing coping strategies, cultivating a resilient mindset, and being adaptable in the face of change. By understanding the different domains and types of immunity, language teachers can better identify areas for improvement and work towards building their immunity over time.

2.2.1 Teaching immunity teaching self-efficacy. The idea of self-efficacy can be used to examine the efforts made by instructors to interact with and support their students' learning, which are the definitional tasks of teachers (Zee & Koomen, 2016). Self-efficacy may be derived from social cognitive theory, which emphasizes the value of agency as a means for people to choose what they do and exert control over it (Bandura, 2006). Self-efficacy is the judgment of one's job performance or occupational competence in light of a particular situation (Bandura,2006 p.4). Thus, teachers' assessments of their abilities to engage students and facilitate their learning constitute their self-efficacy beliefs (Klassen, Tze, Betts, & Gordon, 2014).

A team of teachers in a school may not create a team but some teachers who trust each other can build a community and improve their collective immunity. A new term "collective teacher efficacy" appeared in John Hattie's meta-analysis of effect size on student achievement with an effect size of 1.57 (Donohoo, Hattie, Eels, 2018). When teachers feel empowered, they can shape students' learning and teaching outcomes. English teachers working in the same school may exert power to change the moods of their colleagues. Establishing a sense of community among teachers can have a profound impact on developing collective teacher efficacy, which is a concept that has gained significant attention in recent years. Collective teacher efficacy refers to the shared belief among teachers that they can positively influence student outcomes, coupled with a willingness to work collaboratively to achieve this goal (Donohoo,2016). When teachers possess a high level of collective efficacy, they are more inclined to take risks, implement innovative strategies, and persist in the face of adversity, ultimately leading to better outcomes for students (Deng et al., 2022).

In brief, English teachers working in the same school can play a crucial role in fostering a culture of community and collective teacher efficacy. Through collaboration, sharing of best practices, and supporting one another's professional growth, they can create a culture of continuous improvement of immunity that benefits both teachers and students. Such collaborative efforts can contribute to enhancing the overall quality of education provided by the school, and ultimately lead to better educational outcomes.

2.2.2 Teaching immunity and burnout. Burnout has been studied by scholars of affective research for a long time and the issue is well-known with the questionnaire by Maslach & Jackson (1981). Although immunity is a relatively new concept in

educational research, it is highly related to burnout and its contributing factors. Teachers who can efficiently apply coping mechanisms may experience reduced burnout (Shorosh & Berkovich, 2022). Using coping strategies to deal with burnout is a subset of the teaching immunity domain. A study by MacIntyre et al. (2020) involved 634 teachers. They examined people's coping mechanisms during the COVID-19 pandemic. The results from the participants indicated that workload is the main cause of stress, followed by family health and a loss of control over one's job. Meç (2021) revealed that language teacher immunity types were higher in instructors who taught 20 hours or less than in instructors who taught more than 20 hours. In terms of dependent variables, teachers who teach more than 20 hours per week have higher degrees of burnout and resilience. In other words, instructors who work longer hours are less resilient and are more likely to burn out. Rahmati et al. (2019) conducted a study highlighting that instructors often face stress resulting from several factors, such as time constraints and low self-confidence. As a consequence, their teaching effectiveness tends to decline while their levels of burnout increase.

Based on these overviews, language teacher immunity types are negatively impacted by increased teaching hours, with instructors who teach more than 20 hours per week exhibiting lower levels of immunity and burnout. These results are in line with previous research indicating that increased workload and time constraints can lead to higher levels of burnout and decreased resilience among teachers. Amtmann et al, (2020) suggested that school can build a bank of resilience statements to be used by the teachers which stresses the importance of addressing teacher well-being and promoting strategies for managing stress and building immunity, particularly for those who are teaching longer hours. By recognizing the negative impact of high workload on teacher immunity, and burnout and taking steps to support teacher well-being, schools and educational institutions can promote a positive and sustainable teaching environment for both teachers and students.

2.2.3 Teaching immunity and resilience. Resilience is the skill and aptitude to recover from unpleasant psychological suffering experiences or maintain effective performance despite situations that could traumatize a person (Masten, 2001). When teachers are resilient, they can work in challenging situations with their learners and make the most of the tools at their disposal (Gu, 2014). When the teachers could become resilient and empower their L2 grit, it may result in the enjoyment of language

learning (Derakhshan, Dewaele, and Noughabi, 2022). Teacher immunity levels and resilience contributes to job performance and learning outcomes (Lee, 2022) along with many other PP domains (Azari et al., 2022).

Day and Gu (2014) defined teacher resilience as a dynamic, relative, and developmental trait rather than an innate quality. Furthermore, like others, they discovered that when resilience presents itself in response to a demand, it may also develop and adapt in reaction to emerging conditions or contexts (Chiccetti, 2010). Teachers with productive immunity often demonstrate higher levels of teaching self-efficacy (Demir, 2021), more positive attitudes toward teaching, and greater resilience. Finally, Hiver & Dörnyei (2017) proposed that language teacher immunity is dissimilar to resilience since its formation is adaptive as well as self-organised and it is a domain of professional identity, whereas resilience is more rigid, and it is a domain of individual identity.

2.2.4 Teaching immunity and attitudes towards teaching. Some working conditions in a school may mean different things to different teachers as their attitudes to teaching are personal. In this regard, Struve et al. (2016) found that professional support from colleagues is a significant predictor of teachers' views toward their jobs generally, especially for newly-qualified English teachers. Research on workplace attitudes and well-being finds that actions like giving one's time and effort, cooperating with others despite discomfort to oneself, listening to others and demonstrating consideration for their needs or desires, and cooperating with others strongly correlate with measures of job satisfaction (Judge & Kemmerer- Mueller, 2012).

The views and attitudes that teachers have about their work can be greatly impacted by language teacher immunity and in a similar vein, teaching immunity levels may significantly affect the attitudes towards teaching. To assist teachers in forming productive immunities, teacher trainers are encouraged to ascertain the personality types of the teachers. Administrative managers are advised to safeguard teachers' positions, especially in the private sector, due to the damaging effects of job instability on teacher immunity (Rahimpour et al., 2020).

Attitudes to teaching are shaped by our future aspirations, teacher-selves, WTC (Willingness to communicate), enjoyment (Talebzadeh et al., 2020) and empathy (Tamimi, 2020). In addition to future aspirations, teacher-selves, willingness to

communicate, enjoyment, and empathy, other factors can shape attitudes towards teaching. For example, personal experiences as a student, cultural background, and societal expectations can all influence a teacher's beliefs about teaching and learning.

Research has also shown that teacher efficacy (the belief in one's ability to effectively teach) students can significantly impact teaching attitudes and behaviours (Demir, 2021). A high level of teacher efficacy has been linked to increased job satisfaction and motivation, as well as improved student outcomes. Furthermore, teacher preparation and professional development can also shape attitudes towards teaching. Effective training programs that provide opportunities for reflection, feedback, and collaboration can help teachers develop a deeper understanding of their roles and responsibilities, and ultimately foster a positive attitude towards teaching.

Overall, attitudes towards teaching are complex and multifaceted, influenced by a range of internal and external factors. Understanding these factors and their impact on teaching attitudes is critical for promoting effective teaching practices and improving student outcomes. These improvements will aid with the students' success and achievement.

2.2.5 Teaching immunity and openness to experience. Openness to experience refers to teachers' tolerance for change and novelty in their profession. According to Hoşgörür (2016), openness to change is defined as a process of transformation from one condition to another through a planned or unplanned aspect. Openness to change describes a teacher's ability to deal with ambiguity (for example, "I get impatient when there are no clear answers or solutions to my problems as a teacher."), flexibility and willingness to accept novelty (for example, "The tried and true" methods of teaching are the best"), and attitudes toward taking risks (for example, "I find it hard to give up on something that has worked for me in the past, even if it is no longer very successful.")(Hiver,2017 p.12). Dealing with ambiguity, getting stuck on tried and proven methods, and not taking risks could be indulged as exterminators of creativity, which fosters teachers' coping strategies and autonomy.

Openness to experience is a crucial factor in shaping a teacher's attitude towards teaching. It refers to a teacher's willingness to accept change and embrace new ideas and approaches in their profession. Hoşgörür (2016) defines openness to change as a process of transformation from one condition to another, whether it is planned or

unplanned. An English teacher who is open to change is better equipped to deal with ambiguity, demonstrate flexibility, and accept novelty in their teaching practice. They are willing to take risks and try new methods, even if they have not been proven to be useful in the past. On the other hand, an English teacher who is resistant to change may struggle to adapt to new situations and may be less effective in their teaching. Openness to experience also plays a critical role in fostering creativity among English language teachers. A teacher who is open to new ideas and approaches is more likely to develop innovative and effective teaching strategies. Creativity (Akyıldız & Çelik, 2020) is essential for teachers to adapt to the ever-changing needs of their students and to maintain their autonomy and coping strategies.

In summary, openness to experience is a crucial factor in shaping a teacher's attitude towards teaching. Teachers who are open to change and new experiences are better equipped to deal with ambiguity, adapt to new situations, and foster creativity in their teaching practice. This ultimately leads to improved student outcomes and better teaching immunity and well-being.

2.2.6 Teaching immunity and classroom affectivity. Teachers' positive emotional energy in the classroom is the starting point for classroom affectivity. Despite the adverse and challenging circumstances, a surprisingly large number of teachers not only avoid burning out but also thrive and develop in the profession (Day & Gu, 2014). Teachers' sustained positivity toward their profession provides classroom affectivity in a positive domain. Fulfilment and thriving are undoubtedly much more than just the absence of negative affectivity (Frederickson, 2001). The idea of enjoyment and excitement is a constantly referred element in this literature on teachers' positive emotionality. Enjoyment can be viewed as an internal, subjective teaching experience, whereas excitement is an observable manifestation of this affectivity that acts as the behavioural equivalent to enjoyment (Kunter, et al. 2011). Alexander, Grossnickle, and List (2014) investigated the theoretical basis for this notion of excitement for teaching and unveiled that enjoyment may be an internal teaching experience and a positive attitude toward teaching, whereas excitement is more observable for outsiders as being the foremost element of classroom affectivity.

Through the lens of instructional quality, ELT teachers' excitement has been linked to student learning outcomes and success (Frenzel, 2014). Teachers' excitement and engagement levels are key factors in the triumph of instruction and students'

success. We can associate teacher well-being and teaching enthusiasm. Teaching enthusiasm or excitement can be considered spreadable. It is possibly transmitted from learner to learner, from teacher to learner, or from learner to teacher. Well-being is not merely a mental or individual state, but it scrutinizes how individuals appraise their contexts and experience their roles in their social worlds as parents, teachers, and relatives (Diener et al., 2003).

When students feel positive emotions regarding school and learning, they are impractically engaged in disruptive behaviour or act out. Conversely, a negative emotional atmosphere can lead to negative behaviours. Classroom affectivity also affects the quality of relationships between teachers and students. When teachers create a positive emotional atmosphere, they are more likely to build positive relationships with their students, which can lead to better communication, trust, and collaboration (Kornacki & Caruso, 2007).

Overall, classroom affectivity is important because it can affect students' learning, well-being, behaviour, and relationships with teachers. By creating a positive emotional atmosphere in the classroom, teachers can help to foster a more productive and positive learning environment. By the same token, teachers may have fruitful teaching opportunities. classroom affectivity has gained substantial interest and traction for educational researchers. Classroom affectivity, or the emotional atmosphere of a classroom, is important for several reasons. Students learn best when they are emotionally engaged and motivated. When students feel positive emotions such as interest, curiosity, and enthusiasm, they are more likely to be engaged in the learning process and retain information and the teacher benefit from the engagement of the learners. Classroom affectivity also affects students' emotional well-being. When students feel safe, supported, and cared for in the classroom, they are more likely to have positive self-esteem and mental health which in turn will bring out positive benefits for the teacher’s immunity. The emotional atmosphere of a classroom can also affect students' behaviour.

2.2.7 Teaching immunity and coping. A considerable body of studies has demonstrated how stress-related coping practices affect individuals' psychological and emotional well-being (Canbay & Sönmez, 2023). Studies on coping behaviours at work also reveal that people use a different set of coping strategies that are characterized by a variety of psychological defensive mechanisms (Blanchard, Hebert,

& Blanchard, 2000). Defensive mechanisms, according to some coping theorists, are unconsciously used as a first line of defence to lessen the effects of stressors (James, 2011). When a dangerous stimulus is present, defence-related behaviours occur (Sedikides, 2012), and these processes serve as a filter through which a person's perception of the importance of the events encountered can be changed. Derakhshan (2022) argued that dangerous stimuli for teachers increase the trigger for their self-mechanism, and they need to employ coping strategies to overwhelm the occupational stress teachers face approximately every day.

To wrap up, the literature contends that the existence of risky stimuli in teachers' professional lives can cause the activation of self-defence systems. In order to properly handle the occupational stress, they encounter regularly, teachers must use appropriate coping mechanisms. To assist teachers in overcoming these difficulties and maintaining their well-being and efficacy as educators, it is critical to recognize the value of coping mechanisms and to offer them support networks. Educational institutions, therefore, may establish a climate that supports teachers in their vital role of forming the next generation by addressing the impact of stressors and encouraging good coping methods.

2.3 Domains of teacher well-being

The term "teacher well-being" refers to a positive arousal of emotions in which educators strive to avoid negative feelings while also searching for personal happiness and contentment (Liang, Song & Sun, 2022) and to perform their teaching duties; teachers need several capabilities.

Scholars have scrutinised wellbeing and other PP constructs such as burnout (Karanfil &Yeşilbursa, 2021), teacher immunity (Sariçoban & Kirmizi (2021), and self-efficacy beliefs (Hoang & Wyatt, 2021) resilience (Ergün & Deawele, 2021) and well-being (Mercer &Gregersen, 2020). The research on PP become more wide-spread after the pandemic period. By the end of March 2020, the worldwide pandemic had already afflicted an estimated 1.54 billion children and youth in 185 nations across Asia, Europe, the Middle East, North America, and South America due to school and university closures (Schleicher, 2020) and psychology have gained importance in the educational arena. Post COVID area may be an appropriate time to study well-being after turmoil (Harvey, 2020).

Well-being can be defined in several ways. Definitions may vary depend on before-after pandemic and well-being perspectives. Numerous studies have utilized the term well-being from a hedonic perspective, which is concerned primarily with the individual's relative positive and negative emotional assessments of their realms of life (Kim-Prieto et al., 2005). SWB "is an umbrella term used to describe the level of well-being people experience according to their subjective evaluations of their lives" (Diener & Ryan, 2009, p. 391). Subjective well-being (SWB) is generally defined as "a person's cognitive and affective evaluations of his or her life" (Diener E, 2002, p. 63). In recent years, the affective aspect of language teaching has gained popularity in ELT research.

In contrast, eudemonic definitions of well-being typically involve meaning and self-actualization, describing well-being "in terms of the degree to which a person is fully functioning" (Ryan & Deci, 2001, p. 141). Language instructors' regular days were stressful enough, given their often-severe workloads, time constraints, and problems juggling responsibilities (MacIntyre et al., 2020). The researcher believes that the findings of the current study will aid education authorities in realizing the importance of the psychological aspects of language teaching and designing in-service CPD opportunities for practising teachers.

Fostering the well-being of language teachers proved to be effective. Teachers with high well-being teach more creatively (Bajorek et al., 2014), cultivate better relationships in the classroom (Devries& Zan, 1995), and have higher levels of learner achievement (Mclean, L., & Connor, 2015), have fewer discipline problems (Kern et al, 2014) tend to have learners and teachers with higher well -being (Roffey, 2012). Well-being also combats teacher attrition (Borman & Dowling, 2008), and high rates of burnout across the profession (Haberman, 2005). Teachers' well-being is not a commodity; it is a critical component of the school ecosystem, and without healthy teachers, schools are forced to close (Velez, 2021), having a significant impact on students, families, the community, and the educational field.

To wrap up, promoting the well-being of English Language Teaching (ELT) teachers can yield numerous advantages within the educational domain. Researching the different domains of positive psychology, hence the current study, will help teachers to identify the pillar of well-being and help them to take self-precaution. By exploring interconnected aspects of well-being, such as physical, emotional, social,

intellectual, and occupational, we can identify the specific factors that contribute to a person's overall well-being. This knowledge can be used to develop targeted interventions and strategies for improving well-being in different populations and contexts. Overall, exploring different domains of well-being can help us to understand the complex nature of human well-being and promote more holistic approaches to enhance the quality of life.

2.3.1 Teacher well-being and positive emotions. There might be a strong relationship between teacher well-being and positive emotions (Dreer, 2021). When teachers experience positive emotions, such as joy, contentment, and gratitude, they are more likely to feel satisfied with their work, have better mental and physical health, and be more effective in their roles as educators. On the other hand, when teachers experience negative emotions such as stress, anxiety, and burnout, they may struggle with their well-being and be less effective in their roles. Research has shown that teacher well-being is related to several factors, including the quality of teachers' work environment, their relationships with students and colleagues, and their workload (Jerrim & Sims, 2021). Positive emotions can have a protective effect on well-being by helping teachers cope with stress and other challenges in their work. For example, teachers who report high levels of positive emotions may be more resilient and able to bounce back from setbacks, and they may be more effective at building positive relationships with their students.

In addition to the benefits to individual teachers, there is evidence suggesting that positive emotions in the classroom can have a positive impact on student learning and well-being, as well as learning outcomes (Cheng et al., 2020). Ultimately, teachers need to focus on cultivating positive emotions and building a positive school culture that supports the well-being of both teachers and students.

2.3.2 Teacher well-being and engagement. Learner and teacher engagement may be categorized as current concerns in educational research. From the learners' point of view, learners who are favourably socially engaged can learn languages more effectively (e.g., Moranski & Toth, 2016). Teachers' engagement according to Klassen et al. (2014), may be described as the motivational construct known as "teacher engagement" reflects the teachers' voluntary distribution of their time and energy among tasks connected to teaching (Greenier et al, 2021). It is vital for educators to thrive in their profession. Skaalvik and Skaalvik (2014) stressed the importance of

teacher engagement in sustaining the well-being of continuing the profession. Gkonou and Miller (2019) described the emotional labour of teachers and their ties with their learners as important factors for providing teachers with well-being. Teachers' emotional labour may be related to their goodwill to help learners or other intrinsic motivators (Kocabaş-Gedik & Ortaçtepe, 2021). When teachers are engaged in their work, they are more likely to feel satisfied, motivated, and energized. This, in turn, can lead to better mental and physical health as well as increased effectiveness as educators. However, when teachers are not engaged in their work, they may feel disconnected, frustrated, and burnt out, which can negatively impact their well-being and effectiveness.

Research has shown that teacher engagement is related to several factors (Skaalvik & Skaalvik, 2023), including the quality of the teacher's work environment, their relationships with students and colleagues, and their workload. When teachers feel supported and have the resources, they need to do their jobs effectively, they are more likely to be engaged in their work. In addition, when teachers feel that their work is meaningful and makes a positive difference in the lives of their students, they are more likely to be engaged.

It is important for teachers to be engaged in their work in order to promote their well-being and effectiveness as educators. Engaged teachers are more likely to be motivated and energized, which can help them to better meet the needs of their students and create a positive learning environment. In addition, teacher engagement can have a positive impact on student learning and well-being because engaged teachers are more likely to create engaging and meaningful learning experiences for their students. Watt et al., 2019 investigated the motivational profiles of learners and revealed that engaged teachers bring out career aspirations for themselves to be in the teaching industry for many years. Furthermore, engaged teachers play a crucial role in fostering long-term career aspirations among learners. Watt et al. (2019) conducted a study exploring the motivational profiles of students and found that engaged teachers inspire their students to develop enduring aspirations in the teaching field. This indicates that when teachers themselves are engaged in their work, it creates a ripple effect, positively influencing the career choices and goals of their students.

Additionally, teacher engagement contributes to a supportive and encouraging classroom environment. Engaged teachers are more likely to cultivate positive relationships with their students, promoting a sense of belonging and well-being among learners. This, in turn, enhances student engagement and motivation, leading to improved learning outcomes. Moreover, teacher engagement is closely linked to professional development and continuous growth. Engaged teachers are more inclined to seek opportunities for self-improvement, attend professional development workshops, and explore innovative teaching strategies. This commitment to professional growth not only benefits teachers individually but also has a direct impact on the quality of instruction and the overall educational experience for students.

In conclusion, teacher engagement is a vital factor in promoting both teacher well-being and student success. By fostering a sense of purpose, motivation, and dedication among teachers, educational institutions can create an environment where teachers thrive, students flourish, and the educational spectrum as a whole reaps the benefits. The promotion of educators' well-being and the efficiency of their instruction is greatly aided by teacher engagement. A teacher's motivation and energy levels increase when they are actively involved in their profession, which improves outcomes for both the teacher and the students. Teachers who are actively involved in their classrooms are better able to fulfil the various needs of their students and develop an environment that encourages learning and achievement. Enthusiastic teachers encourage their learners to pursue their career goals, persuading them to enter the field of education they aimed for. Teacher engagement helps all parties involved in the teaching and learning process greatly, increasing teacher engagement should be a top goal in educational institutions.

2.3.3 Teacher well-being and relationships. Teachers' well-being and relationships are closely related, as the quality of a teacher's relationships with students, colleagues, and other stakeholders can have a significant impact on their overall well-being and sense of satisfaction with their work (Spilt, Koomen, & Thijs, 2011; Bobeck, 2002). Positive relationships with students can help teachers feel more fulfilled and motivated in their work, as they can see the progress and growth of their students and feel a sense of purpose and accomplishment. On the other hand, negative or difficult relationships with students can be stressful and draining for teachers, leading to burnout and reduced well-being(Spilt et al, 2011)

Similarly, positive relationships with colleagues can create a supportive and collaborative work environment, which can contribute to a sense of well-being and job satisfaction as well as teaching immunity for teachers. Good relationships with school leadership and other stakeholders, such as parents and community members, can also be important for teachers' well-being, as they can provide support and resources for teachers to do their job effectively. Maintaining healthy and positive relationships is important for teacher well-being, as it can create a positive and supportive work environment that enables teachers to feel fulfilled and motivated in their work.

Having healthy relationships with people who are caring and competent, looking for supportive friends and partners, and utilizing social support networks throughout one's life are all factors that contribute to one's interactions with others. The findings of Howard and Johnson (2004) were consistent with the elements of teacher resilience regarding the meaningful relationships that Bobeck (2002) identified in her study of teachers-in-training. Bobeck identified significant productive relationships, career competence and skills, personal ownership, and a sense of accomplishment as the necessary resources for teachers to develop resilience early in their careers. In a similar vein, seasoned EFL instructors claimed that in contrast to their peers and institutions, they have remarkably positive relationships with their students. They expressed higher hostility toward their co-workers and workplaces (Cowie, 2011). Teachers' emotions appear to have a strong capacity to build their immunity as well. A recent publication by Babic et al., (2022) cited the importance of social relationships with other colleagues and sometimes with parents as the prominent factors for their well-being and providing strong bounds with the institution.

In the Turkey context, instructors working in a foundation university's English Language Preparatory Program typically experience joy as their primary emotion (Aral &Mede, 2018). Their emotions were influenced by factors such as student motivation, relationships with colleagues and students, and their own teaching efficacy. On the other hand, the teachers in the study also reported experiencing anger but attributed this emotion to external issues such as social, institutional, and financial issues rather than to their students. The study's quantitative findings indicated that the emotion that English preparation program teachers experienced the most frequently was the joy that comes from teaching. This finding had statistical significance. In addition, compared to less experienced teachers, teachers with more years of experience reported feeling

happier. Regarding the qualitative findings, three groups of variables were identified as having an impact on the well-being of English teachers: (a) student-related variables, such as emotional well-being based on relationships with students, (b) instructor-related variables, such as these instructors' private lives and issues, and (c) institution-related variables.

Additionally, the experienced EFL teachers in the study mentioned that they had positive relationships with their students compared to their relationships with their colleagues and institutions. Meç (2021) revealed that instructors who are unwilling to grow as teaching professionals and who struggle to form meaningful connections with their students often quit their jobs. To the knowledge of the researcher, there are no other studies done about relationships. As a result, teaching more specifically being an EFL teacher requires positive relationships with students and colleagues. Positive relationships with both students and colleagues also contribute to a positive work environment. When teachers feel supported and connected, job satisfaction increases, stress levels decrease, and overall well-being improves. This, in turn, positively impacts the quality of instruction and the learning experience for students.

In summary, positive relationships with students and colleagues are essential components of being an effective EFL teacher. By nurturing these relationships, EFL teachers can create an environment that promotes student engagement, collaboration, and overall well-being, leading to successful language learning outcomes.

2.3.4 Teacher well-being and meaning. The meaning of education is experienced by a reflective process which results in a feeling of well-being in learners and education stakeholders (Guimard et al., 2015). Life experiences connected to academic study have a part in creating and discovering meaning. Meaning is a sub-domain of the well-being of PERMA profiler (Ryan & Deci, 2001) and people may find meaning, positive psychology seeks to foster a state of inner calm, personal growth, and meaningful existence through the use of one's strengths and abilities (Selignman & Csikszentmihalyi, 2000). Individuals must have a sense of purpose and a plan for achieving their goals to live meaningful lives. Subsequently, personal growth refers to an individual's ability to recognize and develop his or her potential and attach meaning to individual life. The hedonic viewpoint emphasizes the significance of life's purpose, meaning, and worth rather than mere enjoyment (Ryan & Deci, 2001). The meaning of life for learners has been a long-time studied domain in positive

psychology because people often associate life and education aspiration concerning each other programs such as The Meaning of Life - Meaning of Education (SVSF) program were previously created using Meaning and Life Goals as two forms of guidance also known as the "Meaning of Life and Work" (Bernaud et al., 2015). Therefore, meaningful connections foster individuals' well-being and may thrive in life when they have significant others in their lives.

2.3.5 Teacher well-being and accomplishment. Happiness, emotions, life satisfaction, social connections, and accomplishments are examples of subjective aspects of well-being, whereas objective aspects include income, education, and living conditions (Forgeard et al., 2011). Subjective aspects of well-being are the emotions that boost our ties with life and assist us in dealing with its hindrances. Teacher well-being is frequently defined as a teacher's belief in their ability to influence their students' behaviour, as well as their academic achievement, which is a property of a teacher's efficacy (Friedman & Kass, 2002).

One of the critical aspects of a teacher's accomplishment is often thought to be the success of students and their rapport with their learners. In a similar vein, middle school teachers report greater job satisfaction when they are observed to engage learners in high-quality classroom-level interactions (Virtanen, Vaaland, & Ertesvg, 2019). The accomplishment is also a sub-scale in Maslach's Burnout Inventory (Maslach & Jackson, 1981).

Teachers report greater levels of personal achievement when they ascribe conflict to these outside forces (Bibou-Nakou et al.,1999). Higher levels of hardship teachers undergo while they are doing their jobs result in higher levels of achievement for teachers. The significance of student-teacher connections for teachers' well-being is supported for the first time empirically by some of the findings in the study (Spilt et al., 2011). The findings of studies stipulate that teachers' achievement is highly associated with the relationships they have with their learners as the crucial elements and then comes the element of challenges and other relevant factors. To increase the achievement of the teachers, school leaders may look for ways of increasing teacher empowerment which requires teachers to take responsibility for the learners and celebrate their achievements at the end of their educational journey(Linville, 2021).

2.4 Levels of Teacher Well-Being

Teacher well-being is often cited as one of the key issues in education and it can be divided into different levels for better scrutiny (UNESCO, 2022). The ecological lens developed by Bronfenbrenner in 1979 focuses on three levels: macro (e.g., national policies in education), meso (e.g., teacher credentialing regulations), and micro (e.g., individuals and their interactions). This perspective allows us to examine how an ecological perspective might be advantageous because it considers all aspects of an individual's existence.

2.4.1 Macro level of teacher well-being. The well-being of teachers is highly affected by the national policies used in a specific country. Countries often follow and enact their tailored teacher recruitment policies (local exams to choose teachers) such as possessing a good command of English, completing formal education credentials in language-related disciplines, and being experienced. As a developing country, Turkey received many immigrants from other countries and some refugees are qualified to be teachers which may make the selection process to be a state school teacher by increasing the number of candidates. The decisions taken by the MONE (Ministry of National Education) may have a wanted or unwanted consequence on the well-being of language teachers.

In a longitudinal study, Tammenga-Helmantel et al. (2020) looked at the variables that influenced how L2s were used by EFL student instructors both during their teacher preparation and a year after graduation. The study identified language policies in the school and among co-workers, student responses, the practice-related domain brought on by teaching in various contexts, and the participants' individual experiences as former English language learners as the most important factors in their well-being. Sticking L2 only in some private schools is a nationwide policy which may have negative implications on classroom management. In conclusion, taking macro-level decisions may be counter-productive if they are implied deductively assuming that all the schools or teachers are at the same level of functioning.

2.4.2 Meso level of teacher well-being. The meso level of teacher well-being refers to teacher credentials and the workplace. Recently a study by Babic et al., 2022 identified five key elements that the teachers believed were important to their well-being, including work environment, interpersonal relationships, sense of meaning and

purpose, status as a language teacher, and physical health. The results showed that happiness is a collective, socially determined phenomenon as well as a personal, subjective phenomenon.

2.4.3 Micro level of teacher well-being. The researcher's decision to exclude teacher well-being at the micro-level from the current study indicates a deliberate choice to focus on aspects beyond personal accounts and stories. By adopting an ecological approach, the researcher aims to explore broader factors and contexts that influence teacher well-being, potentially offering a more comprehensive understanding of the topic.

The exclusion of personal accounts and stories may stem from a desire to avoid individual biases and subjectivity that can be associated with qualitative data. Instead, the researcher may be inclined to gather and analyse quantitative data or adopt a more objective lens to explore the broader systemic, organizational, or societal factors impacting teacher well-being.

This shift in focus suggests a desire to examine macro-level factors that contribute to the well-being of teachers. Such factors could include institutional policies, organizational structures, professional development opportunities, workload distribution, and support systems available to teachers within the educational system. By investigating these elements, the researcher seeks to uncover potential systemic interventions or policy changes that can positively impact teacher well-being on a larger scale.

Moving beyond personal accounts and stories in an academic study allows for a more rigorous examination of the factors that influence teacher well-being. It enables researchers to gather data from a variety of sources, including surveys, statistical analyses, and existing literature reviews. This approach may also involve considering theoretical frameworks or models that shed light on the complex interplay between different variables and their impact on teacher well-being.

By adopting an academic approach that delves into macro-level factors, the researcher aims to contribute to the existing body of knowledge surrounding teacher well-being. This research design allows for a broader understanding of the topic, facilitating the development of evidence-based recommendations and interventions to support teacher well-being in educational contexts.

2.5 Summary of Literature Review

The literature review section has comprehensively explored the topic of well-being in education, followed by an exploration of the interconnectedness of well-being and immunity within the context of English Language Teaching (ELT). Subsequently, the domains of well-being and immunity have been elucidated, drawing upon previous national and international research conducted in the field. Concluding this section, an examination of the levels of well-being has been provided.

Stress (15), burnout (8), mindfulness in the classroom (8), well-being (7), self-efficacy (7), self-compassion (6), positive emotions (4), emotional exhaustion (4), and work satisfaction (3) were the notions that were most frequently used (Dreer and Gouase, 2022). Multiple studies looked at the dependent variables of mental health, recovery, negative affect, thankfulness, and happiness. The current study scrutinised two different domains namely well-being and immunity.

However, a research gap has been identified in the affective domains of ELT specifically in Turkey. Therefore, the present study aims to investigate well-being and immunity, with the primary objective of uncovering the relationship between these domains and seeking potential strategies to cultivate them. Accordingly, the following research questions were formulated.

RQ1: What is the level of well-being of English teachers in Turkey?

RQ2: What is the relationship between teacher immunity and well-being in English language teachers?

RQ3: What factors (teaching self-efficacy, burnout, resilience, attitudes towards teaching, openness to experience, and classroom affectivity) have an impact on the development of immunity of English language high school teachers?

RQ4: What factors (positive emotions, engagement, relationships, meaning and accomplishment) have an impact on the well-being of English language high school teachers?

RQ5: Are there significant differences in the immunity of high school teachers in the pre-and post and delayed training phases?

RQ6: Are there significant differences in the well-being of high school teachers in the pre-and post-delayed training phases?

RQ7: What are English language teachers' reflections on their well-being in the pre- and post-training stages?

Chapter 3
Methodology

This chapter provides a detailed account of the study's methodology. The participants were thoroughly explained, and the data collection tools and processes, including all phases and justifications, were provided. The chapter explains the procedures that were employed to carry out this research. Below is a detailed explanation of the participants, setting, and tools used to collect data from the participants. Furthermore, the validity and reliability of the tools, as well as data collection processes and data analysis from participants, are discussed.

3.1 Research Design

The current research is a sequential, exploratory, and mixed-method research design with an embedded quasi-experimental intervention. For investigating complex processes between different constructs, using mixed methods research provides researchers with valet quantitative and qualitative data and enables them to acquire an in-depth understanding of the researched phenomenon (Fetters et al., 2013) the participants received an 8-week of intervention (single group interrupted time series) and their pre, post and delayed treatment results will be calculated and reported.

In quasi-experimental designs, the inclusion of a control group is not always feasible or possible. Quasi-experimental designs lack random assignment to groups, which is a key feature of true experimental designs (Reichardt, 2019). When individuals are not randomly assigned, the procedure is called a quasi-experiment (Creswell, 2009). The current study employed twelve English teachers working in a state high school in İstanbul, so there were no random groups. The current research will employ mixed-method research methods. Also, a mixed-method methodology will be employed, which entails first gathering quantitative data and then presenting quantitative conclusions with in-depth qualitative data (Creswell, 2013). The current study is sequential as in the first cohort, the data were collected from 510 teachers from different cities in Turkey, and then the researcher run regression analysis to unveil the relationships among constructs. The findings of the analysis helped the researcher to shape the intervention training.

3.1.1 Piloting. The teachers participating in piloting training had the opportunity to develop their understanding of learners and teacher well-being and immunity. Some weekly readings were from the book by Williams, Mercer and Ryan (2016). Exploring psychology in language learning and teaching, but the content of the course was fluid to change depending on the needs of the participant group.

A pilot study with a sample size of eight English high school English teachers was conducted prior to the investigation. The primary goal of this pilot study was to evaluate the research instruments, assess the feasibility of the proposed study, and modify the research processes. Another purpose was to put together and evaluate a curriculum based on the teaching immunity scale. The researcher hoped to gauge how well the program's curriculum applied in real-world situations with prospective participants. The perspectives of the participants on well-being were another goal of our study. In addition to syllabus validation and comprehending participants' conceptual viewpoints, the researcher attempted to establish the possible workload that participants could realistically undertake on a weekly basis. This was especially significant since it led the researcher to decide on the program's assignment criteria, allowing us to avoid participants' fatigue. At the same time, our pilot research helped to define the breadth and type of competences that participants may learn through this program. The researcher also gathered their feedback and expectations for such a program. The participants of the pilot study offered program adjustment recommendations and useful insights to improve the program's efficacy. Moreover, the researcher utilized the pilot study as an opportunity to apply our measurement scales, checking for normality levels and any inconsistencies that could potentially compromise the study's reliability. In addition, it was crucial to troubleshoot technical and timing issues in advance and identify helpful external resources for the participants.

Reliability analysis of the pilot study revealed a Cronbach's alpha level of .83, indicating high internal consistency and robustness of our measuring instruments. Using these results, the researcher made several modifications to the original program structure. The duration of the course was reduced from 10 to 8 weeks, with a greater emphasis on hands-on practice over theoretical instruction. Additionally, to foster a collaborative and engaging learning environment, group and pair work were incorporated into the course framework while keeping a learning diary.

This methodical pilot study, hence, proved critical to the research process. It allowed the researcher to fine-tune our methodology and program content, thereby paving the way for a more effective and reliable main study. Since the piloting took place during the pandemic period, the sessions were held on Zoom and the weekly readings were uploaded on Moodle https://istanbulakademi.meb.gov.tr/moodle/login/index.php?enrolkey_skipsso=1which helped the participants to meet the course requirements more systematically. Each week, the training took about two hours. The profile of the participants is displayed in the table below.

Table 1

Characteristics of Participants in the Piloting Training

Participant	Age	Teaching Exp.	Educational Background.
1	50-60	over 20 years	ELT
2	30-40	11-15 years	ELT
3	20-30	11-15 years	English Literature
4	30-40	11-15 years	ELT
5	40-50	16-20 years	ELT
6	20-30	0-5	Translation
7	20-30	5-10	ELT
8	20-30	5-10	ELT

The following section summarized the content of each week's training, the name of the activities along with the slides (see Appendices J).

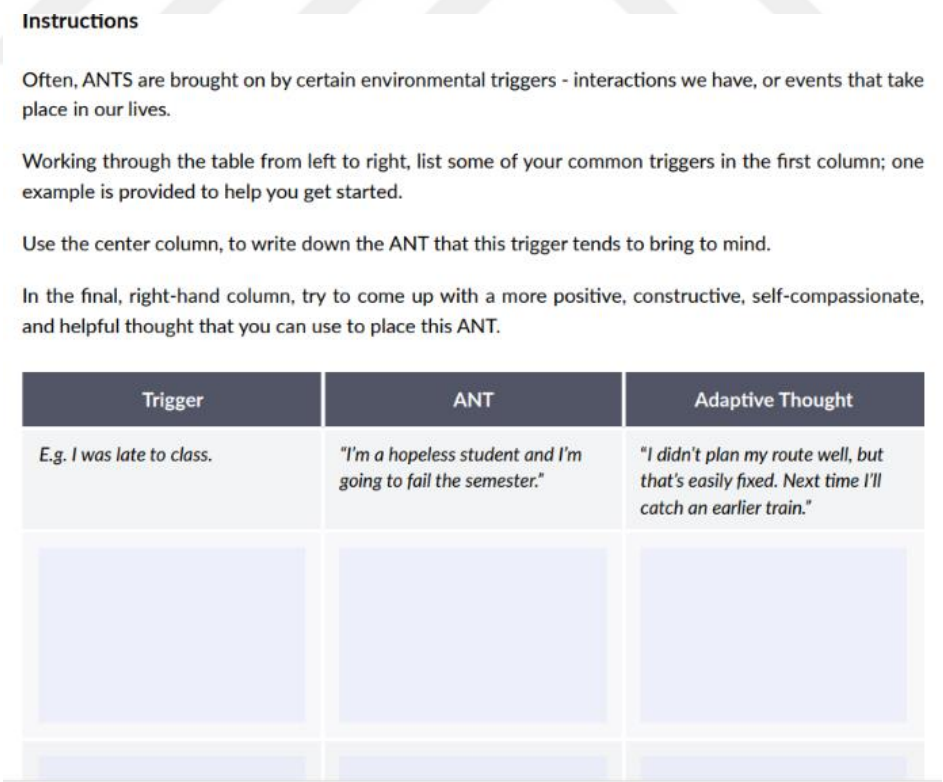
Module 1: Introduction to Positive Psychology and Well-Being (17.05.2022)

In module 1, participating teachers were interviewed on their expectations from a positive psychology course and their dispositions towards their well-being. In the first session, the participants were given a task to reflect on teacher-centred, student-centred, and learning-centred classrooms and their effects on teachers' well-being. Next. the teachers were invited to talk about their challenges as EFL teachers in Turkey which will form the solutions to challenges. In the following part, using the key

concepts while describing the challenges participants described participants described well-being and individual factors around it. In the last slot of the training, participating teachers were presented with different teacher types and how they can foster their well-being.

Module 2: A Holistic Approach to Foster Well-Being(24.05.2022). In module 2, the participating teachers (PTs) were presented with different learner characteristics and how to survive teaching among different learner groups. The weekly reading was about teacher empowerment and well-being, and the participants shared their reflections regarding the article (Zembylas & Papanastasiou, 2005).

They were given some activities to prioritise their teaching duties. They discussed setting up classroom rules, lesson planning, the Pomodoro technique(Swan et al,2020) and how these elements could foster their well-being. In the Pomodoro technique learners are given a 25-minute study time and five minutes break and every three rounds, the PTs were given half an hour break. In the last part of the training, Then, they were asked to discuss about a timetable according to Circadian rhythms and they had the worksheet on Negative Automatic Thoughts.



Instructions

Often, ANTS are brought on by certain environmental triggers - interactions we have, or events that take place in our lives.

Working through the table from left to right, list some of your common triggers in the first column; one example is provided to help you get started.

Use the center column, to write down the ANT that this trigger tends to bring to mind.

In the final, right-hand column, try to come up with a more positive, constructive, self-compassionate, and helpful thought that you can use to place this ANT.

Trigger	ANT	Adaptive Thought
E.g. I was late to class.	*"I'm a hopeless student and I'm going to fail the semester."*	*"I didn't plan my route well, but that's easily fixed. Next time I'll catch an earlier train."*

Figure 3. Negative Automatic Thoughts, https://positivepsychology.com/challenging-automatic-thoughts-positive-thoughts-worksheets/

After they have finished with the worksheet above, they shared their new learning and experiences with others in groups.

Module 3: Fostering Well-Being and Social-Emotional Learning Skills (31.05.2022). The content of the week was requested by participants on demand. The lesson was conducted online on 31 May 2022. The content was bounded to mindfulness techniques and assisting learners' well-being. The participants experienced "body scan meditation" and used social-emotional skills (SEL, hereafter). After reflection on meditation, the participants tried "attentive listening" skills and practised as some of their learners were trauma-informed and they need further knowledge to help them. They reflected on the "autopilot" mode of teaching and how to overcome it by adding pints of creativity. In the last 30 minutes, the participants discussed how the negativity bias affects our parasympathetic nerve system and how making use of the power of now, would enhance their lives.

Module 4: Supportive Techniques for Teacher and Student Well-Being (7.06.2022). The supportive techniques include but are not limited to time and stress management tips, setting up classroom rules and a code of conduct with parents. They also learned the promoting critical reflection (Farell, 2016) and how positivity would feed into the positivity in our courses. The intervention programme was given high importance and meticulously composed depending on the needs of practising teachers working at state high schools. The area of positive psychology applied to schools demonstrated the efficacy of positive psychology interventions and their piloting in adult samples (Francis et al., 2021).

3.1.2 The Intervention Program. The intervention programme was conducted for 8 weeks face-to-face in the building of the Provincial Directorate of National Building in İstanbul. Each session lasted three hours and the total duration of the course was 24 hours. The titles of each week and some brief information is presented below.

3.1.2.1 Week1-Introduction to Positive Psychology and Well-Being. (26.09.2022) The PTs were interviewed in the first module on their issues and expectations from the intervention. The session started with the opportunities and threats of ELT these days given the impact of the pandemic. Participants discussed how teachers can create learning opportunities by noticing (Heaversedge & Halliwell, 2010). The teachers were presented with different archetypes and discussed how these teachers survive vis-à-vis their

characteristics. They filled out the first round of the scales and their learning diaries regarding the first meeting (See Appendix I).

3.1.2.2 Week2-Attitudes Towards Teaching (3.10.2022). After revising the first week, in module two, the participants discussed the ways of being resilience in their classroom and their teaching beliefs. They were presented with some findings on classroom "power" and the importance of putting fair-front rules to manage their teaching. The participants also reflected on their future aspirations, teacher-selves, WTC (Willingness to communicate), enjoyment (Talebzadeh et al., 2020) and empathy (Tamimi, 2020) towards their teaching and mull over their future as English teachers in an ever-changing world. They practised empathy-building activities for their learners as they offered that sometimes they need patience and empathy for their learners.

3.1.2.3 Week 3- Classroom Affectivity (10.10.2022) Session 3 aimed to make teachers aware of their teaching-specific emotional baggage and how our profession is reflected in our daily lives. For the increment of positivity, the participants did the activity called "3 good things happened today"

Figure 4. Three good things happened today.

Source: https://www.eltandhappiness.com/uploads/1/1/2/5/11/11251138/3_good_things_happened_today.pdf.

Subsequently, the participants were asked to explore the connection between teacher well-being and academic achievement. As part of the practical implementation of their research, they were introduced to an engaging activity known as the photo-savouring task, complemented by a vibrant exchange of compliments within the classroom setting. This activity was well-received by the participants, primarily due to its simplicity and practicality for integration into their teaching practices. The photo-savouring task involved encouraging teachers to appreciate and savour positive moments captured through photographs. By actively engaging in this activity, teachers were able to reflect upon and relish the enjoyable aspects of their teaching experiences. The incorporation of compliments further enhanced the positive atmosphere within the classroom, fostering a supportive and uplifting environment.

Notably, the researcher provided positive feedback after the activity, acknowledging its efficacy in promoting teacher well-being and its ease of implementation in the teaching context. The utilization of such activities holds significant potential for nurturing teacher well-being, thereby positively influencing their overall job satisfaction and performance for teachers.

Furthermore, the training program's final segment introduced the concept of the "beginner mind," which emphasizes perceiving familiar teaching routines and activities with fresh eyes, as if experiencing them for the first time. By adopting this perspective, teachers can cultivate a heightened awareness of various aspects often overlooked amidst the demands and busyness of their profession. This approach enables them to rediscover the intrinsic joys and meaningful moments inherent in their daily teaching practices. By incorporating the principles of the beginner mind, teachers can tap into a renewed sense of enthusiasm and appreciation for their work, fostering a positive mindset that contributes to their overall well-being. This training component serves as a valuable reminder to prioritize self-reflection and attentiveness to the positives in the teaching journey, enhancing job satisfaction and ultimately benefiting both teachers and their students.

3.1.2.4 Week 4- A Holistic Approaches to Foster Well-Being.(17.10.2022) In module four, participating teachers have been asked to search for different ways to foster well-being for the first part of the session they presented their ideas and findings first and discussed how can they use them in the second part of the session uh the trainer presented some ideas on how to prioritize the teaching duties we need the perform by giving brain

breaks or neutral gear. Then, the PTs discussed how teaching beliefs shape our practices, and how these practices trigger stress. As other techniques to foment well-being, the participants talked about the Pomodoro technique to stay focused and functioning in their lives. In the last slot of the session, PTs were given a handout about https://positive psychology.com/challenging-automatic-thoughts-positive-thoughts-worksheets/ and practised dealing with negative thoughts which pave the way to their well-being and students' learning.

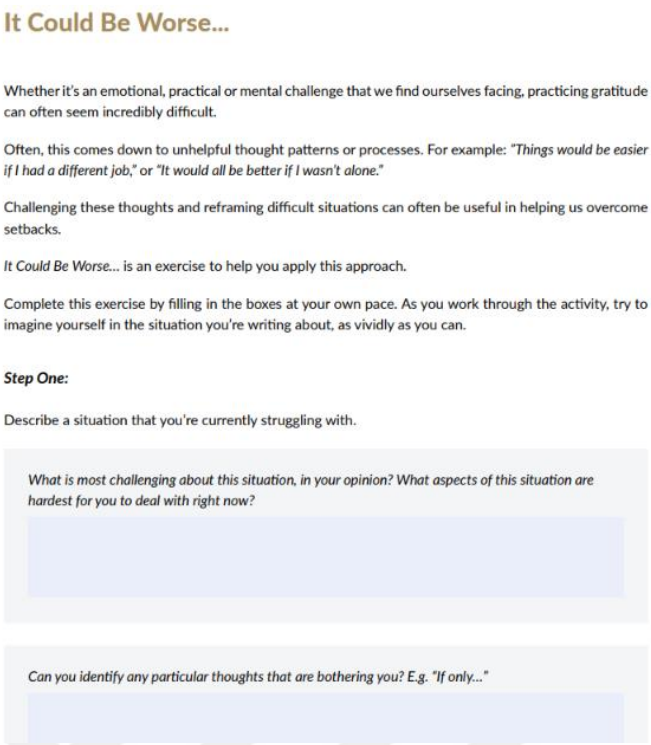
3.1.2.5 Week 5-Fostering Well-Being and Social-Emotional Learning Skills (24.10.2022).

In week 5, PTs learned about the energy breaks and exercises they could integrate into their teaching which will energise the class and make the PTs happier.

Figure 5. Time confetti Activity

They practiced time confetti activity which regulates their thinking skills within the think-pair-share framework (Usman, 2015). The PTs also experienced a happiness dictation task which increase the students' interactivity in the classroom and make them aware of ways to be happier in life. The participants were given an article to read for reference (Kangas-Dick, & O'Shaughnessy, 2020). Time confetti activity is available at https://www.eltandhappiness.com/new---time-confetti.html

3.1.2.6 Week 6- Resilience and Coping Strategies (31.10.2022). In the resilience session (Module 86), the focus was on elements of resilience. First, the participants discussed the role of supportive people, strategies to spur resilience, sagacity (wisdom and insights) solution-seeking behaviours (Malhi et al, 2019) and their roles to stay resilient in their professional lives. In retrospect, for past resilience behaviours, they were given a handout.



It Could Be Worse...

Whether it's an emotional, practical or mental challenge that we find ourselves facing, practicing gratitude can often seem incredibly difficult.

Often, this comes down to unhelpful thought patterns or processes. For example: *"Things would be easier if I had a different job,"* or *"It would all be better if I wasn't alone."*

Challenging these thoughts and reframing difficult situations can often be useful in helping us overcome setbacks.

It Could Be Worse... is an exercise to help you apply this approach.

Complete this exercise by filling in the boxes at your own pace. As you work through the activity, try to imagine yourself in the situation you're writing about, as vividly as you can.

Step One:

Describe a situation that you're currently struggling with.

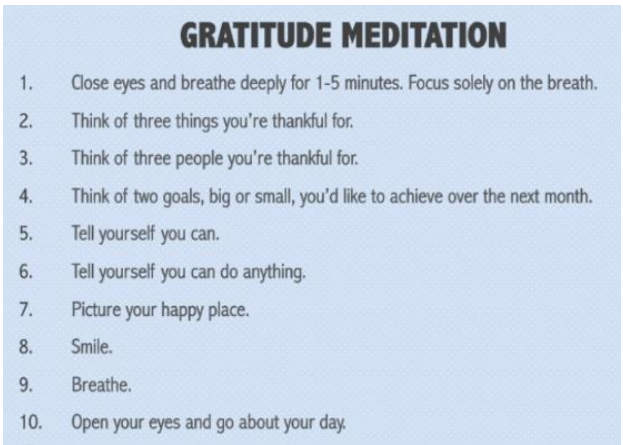
What is most challenging about this situation, in your opinion? What aspects of this situation are hardest for you to deal with right now?

Can you identify any particular thoughts that are bothering you? E.g. "If only..."

Figure 6. It could be worse Activity

The PTs described how they managed to overcome a challenge and what could be worse in that particular scenario to get their self-compassion. There were even emotional experiences to be narrated by participants and towards to end of the session, the participants stumbled upon a list of strategies to be used for their teaching. The activity is available at https://positive.b-cdn.net/wp-content/uploads/2020/09/It-Could-Be-Worse.pdf.

3.1.2.7 Week 7 Teaching Self-Efficacy. (07.11.2022) In Module seven, teachers were guided to share what they are good at in their teaching. Then they commenced doing the "gratitude meditation".



GRATITUDE MEDITATION

1. Close eyes and breathe deeply for 1-5 minutes. Focus solely on the breath.
2. Think of three things you're thankful for.
3. Think of three people you're thankful for.
4. Think of two goals, big or small, you'd like to achieve over the next month.
5. Tell yourself you can.
6. Tell yourself you can do anything.
7. Picture your happy place.
8. Smile.
9. Breathe.
10. Open your eyes and go about your day.

Figure 7. Gratitude Meditation.

Source: https://ggia.berkeley.edu/practice/gratitude_meditation

It was experienced individually and then they shared the results in their pairs. Then, they shared the effects of high/low teaching self-efficacy on teachers' well-being and immunity based on the article (Xiyun et al., 2022). In the final part of the module, PTs negotiated professional development programs that provide training in classroom management, student engagement, and other teaching skills that can boost teachers' self-efficacy, creating a positive school culture that emphasizes collaboration, support, and recognition that can enhance teachers' well-being. Finally, encouraging teachers to engage in self-care practices such as exercise, mindfulness, and time management can also improve their well-being was agreed as the part of action-plan for teaching self-efficacy.

3.1.2.8 Week 8- Supportive Techniques for Teacher and Student Well-Being. (14.11.2022) In the final module of the intervention, the participants experienced some tasks to bring their learning to a close in the course. They underwent photo-savouring tasks, keeping positivity journals, and significant other activities. They also talked about the facts; we all know but do not want to talk about. The participants made a weekly plan of useful techniques to improve their well-being. As a concluding it-all activity, the participants enjoyed mindful eating and sitting activity with a centring focus, and they had their end-of-the-course interview face to face which brings the end of the intervention.

3.2 Research Setting and Participants

The current research was conducted with state high school teachers working in İstanbul, Turkey. It is a cosmopolitan city with 160.483 teachers in 6.862 schools and 2.922096 students. The intervention and the other data collection procedures were conducted in Turkey. The investigation was carried out throughout the academic year of 2021-2022 employing the convenience sampling method, characterized by the deliberate selection of readily available and voluntary participants (Teddlie & Tashakkori, 2009). The current research will employ mixed-method research methods. The researcher will deliver an 8-week course online using Zoom via (https://istanbulakademi.meb.gov.tr/akademiler.php).

For participants, there were group A and B. The participants in group A consist of 510 ELT teachers in Turkey. The responded the survey that is shared on social

media or via official announcements. Based on the data gathered from group A, RQ 1-2-3-4 were answered.

The group B, the participants are twelve EFL teachers from various districts of İstanbul, eleven of the participants are females and one participant is male. A quasi-experimental methodology was employed in the intervention, which entails first gathering quantitative data and then imparting quantitative conclusions with far-reaching qualitative data (Creswell & Pot, 2013).

3.3 Data Collection Procedures

For the first cohort of the study, data were collected from all English teachers in Turkey to determine the levels of immunity and well-being and 510 teachers responded the survey. As for the second cohort of the study, an 8-week intervention was held with twelve high school teachers and the results were collected. The quantitative data were collected pre and post of training and delayed which is 2 months after the training. The qualitative data were collected through the journal entries which are collected weekly and the post-training interview which questions the whole process of intervention and changes in their well-being and attitudes.

The second cohort of the study focused on conducting an 8-week intervention program specifically designed for high school teachers. The purpose of the intervention was to explore the impact of the program on their levels of immunity and overall well-being. The researchers collected quantitative data by measuring various variables before and after the training sessions, as well as two months after the completion of the intervention. These measurements allowed the researchers to assess any changes in immunity and well-being over time.

In addition to quantitative data, the researchers also gathered qualitative data to gain deeper insights into the experiences and perspectives of the participating teachers. Weekly journal entries were collected from the teachers throughout the intervention period, enabling them to reflect on their experiences, challenges, and any notable changes in their well-being or attitudes. This qualitative data provided a more nuanced understanding of the teachers' individual journeys throughout the intervention.

Furthermore, a post-training interview was conducted with each participant to capture their overall perceptions of the intervention and its effects. The interview encompassed a comprehensive exploration of the entire intervention process, including

the specific techniques and strategies employed, their personal experiences, and the perceived impact on their well-being and attitudes towards their profession. This interview data served as a valuable source of rich, contextual information, offering deeper insights into the teachers' transformative experiences and shedding light on the mechanisms underlying any observed changes in immunity and well-being.

By combining both quantitative and qualitative data collection methods, the study aimed to provide a comprehensive understanding of the effects of the 8-week intervention on high school teachers' immunity levels and well-being. The data collected from both cohorts, including the pre- and post-training measurements, delayed measurements, journal entries, and post-training interviews, were analyzed and interpreted to draw meaningful conclusions about the effectiveness and long-term impacts of the intervention on the participants' well-being and attitudes.

3.3.1 Data collection instruments. As this study employs a mixed-method research design, qualitative and quantitative data collection instruments were utilized. To gather qualitative data, interviews with 12 (N=12) trainees were conducted. The interviews were held online on Zoom, and the recordings were kept for analysis on password-protected computers. The semi-structured interview protocol was constructed and adapted from Hiver (2017) based on the objectives of the study and the reflections of teachers with quantitative results.

3.3.1.1 Interviews. Dörnyei (2007, p.9) expressed that interviewing, in addition to having social acceptance, is a natural way of collecting data. There are four types of interviews: structured, open-ended (unstructured), semi-structured and focus group interviews (Irani,2019). During the process of conducting semi-structured interviews, the researcher adhered to the guidelines recommended by Fontana and Frey (1994). These include a) avoiding lengthy explanations of the study and using the standard explanation provided by the supervisor, b) staying within the study introduction, sequence of questions, and question-wording, c) not allowing interruptions from other people during the interview, or allowing them to reply for the respondent or offer their own opinions about the questions, d) refraining from suggesting a response or agreeing or disagreeing with a response, e) not discussing personal views on the topic of the question or survey, f) not making interpretations about the meaning of a question but simply repeating the question and giving instructions or clarifications provided in training or by supervisors,

and lastly not improvising, such as by making wording changes (p. 364). The following table summarizes the objectives of the semi-structured interviews:

Table 2

Objectives of the semi-structured interviews

Interview	Objective
Pre-training Interview	To understand the participants' well-being backgrounds as an individual and as a teacher. To establish rapport with them To have an in-depth understanding of the participants' formation of immunity.
1st-while training interview	To look into the teachers' motivation to include affective teaching practices to teaching, learning the emerging needs and share their ideas and feelings about their progress.
2nd post-training interview	To explore the impact of training on participants, specifically whether and how their participation in this training changed their well-being and immunity.

3.3.1.2 Learning Diaries. Learning diaries serve as a means for participants to reflect upon and record their thoughts, feelings, and insights related to their learning journey over a specific period (Porto,2007). By maintaining regular entries in their learning diaries, participants provide researchers with first-hand accounts of their educational experiences, including challenges faced, strategies employed, and personal growth observed.

In the current research, the participants were encouraged to write in their dairies and sent it to the researcher. Through the analysis of diary entries, researchers can identify patterns, themes, and recurring issues that emerge from participants' reflections. This qualitative data provides rich and detailed information, enabling

researchers to explore the complexities and nuances of the learning process from the participants' perspectives. It also served as a means for self-regulation. Participants can use these diaries to set goals, monitor their progress, and evaluate their learning outcomes. They are also encouraged to make notes on learning strengths, weaknesses, and areas for improvement, making notes on their progress made them more reflective. Having a reflective practice may result in greater self-awareness and a deeper understanding of one's professional practice. Learning diaries are used to set personal and professional development goals and to monitor progress towards those goals over time. This can contribute to a sense of accomplishment and motivation to continue developing. By maintaining a record of their learning, ELT teachers can ensure continuity in their development efforts. This can help to reinforce learning and prevent the forgetting of important insights or lessons. A learning diary can serve as evidence of learning, which may be required for CPD credits or certification in some learning circumstances. Regularly reflecting on and writing about one's experiences and learning can improve metacognitive skills, such as self-regulation, which are valuable for lifelong learning and professional development.

Overall, the use of learning diaries in this academic research offered a valuable means of capturing subjective experiences (noticing incidents) and promoting self-reflection (Rose, 2019) enabling researchers to gain a comprehensive understanding of the multifaceted nature of the intervention and the development of teaching immunity (See Appendices I).

3.3.1.3 The Teacher Immunity Questionnaire (Hiver, 2017). The Teacher Immunity scale adapted from Hiver (2017) aimed to seek to determine whether demographic information influences language teacher immunity and to investigate the types of immunity that state schoolteachers have developed (See Appendix A). The questionnaire contained 39 items that were organized into seven categories. Teaching self-efficacy (7 items e.g. “I have enough training and experience to deal with almost any learning problem in the language classroom.”), burnout (5 items e.g. There are days at school when I feel vulnerable.), resilience (5 items e.g. “I can get through difficult times because I’ve experienced difficulty before”), attitudes toward teaching (5 items e.g. “If I could choose an occupation today, I would not choose to be a language teacher.”), openness to experience (6 items e.g. In my teaching, I find it hard to give up on something that has worked for me in the past, even if it is no longer very successful.), classroom affectivity

(6 items e.g., “Overall, I expect more good things to happen to me in the classroom than bad”), and coping are among the characteristics (5 items e.g. When I encounter a bad situation at school, I look for something good in what is happening.).

The questionnaire used a four-point Likert scale, with responses ranging from strongly disagree (1)' to strongly agree (5).' The Cronbach’s alpha values of all the subscales in the study of Hiver (2017) are presented, in the appendix H.

3.3.1.4 Well-being Scale (Seligman, 2011). PERMA is a five-part model of psychological well-being and happiness that defines a sense of fulfilment, enjoyment, and significance. It may be measured using the 23-item PERMA Profiler (Butler & Kern, 2016), which assesses each of the five PERMA dimensions with three items. Along with core questions, the PERMA Profiler includes measures of important negative emotions and overall health that were originally labelled as "filler items,” which give useful information on their own. The 15 items of the PERMA will be utilized as a composite assessment of teacher happiness and well-being in the current study, with the sub-scales of Positive Emotions, Engagement, Relationships, Meaning, and Accomplishment (See Appendix B).

An interview procedure was created to act as a guide during the interviews for the qualitative component of the research. The interviewers' follow-up questions were prompted by the participants' responses. There were two broad portions in the interview protocol. Each respondent's personal experience as an English teacher was specifically questioned in the first section. In the second portion, some questions were asked about their formation of immunity after taking a course to increase their well-being. (Appendix C)

3.3.2 Validity of the questionnaires. Validity can be addressed in two ways: by expert judgment or by running a confirmatory factor analysis (Ringner, 2008). The simple logic behind confirmatory FA is that the extracted factors, which we hope to correspond to our questionnaire’s subscales, should be able to explain a huge portion of the variance, namely above .80%, in the data collected by that questionnaire. It is supposed that some error is acceptable because of environmental distractions that might affect respondents’ answers or choices or the overlap in the loadings of items, i.e., one item loading on more than one factor. When items load on more than one

factor, they may reduce the cumulative variance that can be explained by a questionnaire.

Unlike reliability tests, whose results are simple and easy to comprehend, validity test results are complicated and a little more difficult to understand. However, we will try to explain the tables in adequate detail to make them understandable. An important point to take into consideration here is that FA/PCA works better with huge sample sizes. Fortunately, the size of the sample in this study was sufficiently large to meet the requirements of FA/PCA.

3.3.3 Normality analysis. The assessment of the normality of score distributions plays a crucial role in conducting statistical tests. A normal distribution enables the application of parametric tests, which possess greater statistical power in detecting differences or relationships compared to non-parametric tests. Conversely, analyzing non-normal distributions using parametric tests may lead to distorted results. Hence, it was imperative to employ normality tests to evaluate the distributions of scores in our analysis.

The 1-sample K-S test results, represented in the above table, reveal that all the distributions have been normal and therefore we could have safely run the parametric tests where required.

3.4 Setting and Participants

The setting of the study is high schools from different districts of Istanbul. The participants in this study were randomly selected from all districts of İstanbul. They applied to intervention via the website https://istanbulakademi.meb.gov.tr/ SysOs110.php?cID=5& pID=937 operated by the Ministry of Education. The course was planned, and it was announced to high schools in İstanbul via social media and official announcements were sent to schools individually. Then, teachers had two weeks to apply, and they could find detailed information on the schedule on the website. Eighteen teachers applied via using the LMS eliminated primary and secondary ters and the course started with fourteen English teachers, two of them dropped out and twelve of them managed to join an 8-weeks long course.

3.4.1 The role of the researcher. Chammas (2020 p.34) highlights the importance for researchers, particularly those employing qualitative methodologies, to clearly define their roles to enhance the credibility of their research. According to

Creswell (2013), qualitative research is characterized by self-reflection and emphasizes the role of the researcher in interpreting and presenting qualitative data. As such, qualitative research presents both advantages (Smyth & Holian, 2008) and challenges (DeLyser, 2001) for researchers who adopt an emic stance. While an emic perspective enables qualitative researchers to discern and evaluate the truth (Dhillon & Thomas (2019), it also exposes them to the risk of familiarity, which may lead to loss of objectivity or bias as well as the challenge of role duality (Fletcher, 2019).

The present study involved the colleagues of the researcher, who adopts an emic perspective. The term "emic" refers to an insider's viewpoint or understanding of a particular culture or group, in contrast to an "etic" perspective, which represents an outsider's perspective. By adopting an emic perspective, the researcher aims to gain an in-depth understanding of the experiences, beliefs, values, and practices of the colleagues being studied. Consequently, it is imperative to acknowledge and address the challenges that may arise when conducting qualitative research from an emic stance in order to satisfy the four criteria for trustworthiness proposed by Lincoln and Guba (1985). These criteria include a)credibility, which refers to the degree of confidence in the accuracy of the findings; b) transferability, which reflects the degree to which the findings apply to other settings; c) dependability, which indicates the consistency and replicability of the findings; and d) confirmability, which demonstrates the degree to which the findings are shaped by the respondents and not influenced by researcher bias or motivation.

Lincoln and Guba (1985) proposed a set of techniques to fulfil the criteria for trustworthiness, which include prolonged engagement, persistent observation, triangulation, peer debriefing, negative case analysis, referential adequacy, member-checking for credibility; thick descriptions for transferability; inquiry audit for dependability; and confirmability audit, audit trail, triangulation, reflexivity for confirmability. Confirmability of research is related to its objectivity (Patton, 2002).

The current research had prolonged engagement as the researchers have been working in the area for a long time. Member-checking for credibility was done in the last interviews and the researcher asked for reflections from the participants. The research triangulated the data resources with learning diaries, interviews and quantitative analysis. Finally, to address the challenge posed by the researcher's insider position and ensure the credibility and trustworthiness of the current study, the author

employed strategies such as data triangulation, peer debriefing, and member-checking to establish the reliability of the findings. The researcher also audited the data collection and analysis process with the help of another researcher who adopted an etic perspective.

3.4.2 Data analysis procedures. Techniques for both quantitative and qualitative data analysis were described in-depth in this part and employed in the current study. For the purposes of this study, data gathered from the aforementioned instruments were analyzed using a combination of quantitative and qualitative techniques, or what Clark (2019) refers to as a "mixed study design," to provide a more thorough and in-depth understanding of the research problems, as the data were validated using the triangulation of various instruments. The interview data were concurrently transcribed and analyzed as they were collected in order to feed into subsequent interviews (Yin, 2016).

The proper statistical test for the time series design of the current study's many dependent variables is a repeated measure multivariate analysis (MANOVA). Although multicollinearity may result, preliminary analysis revealed significant correlations among the dependent variables. According to Meyers, Gamst, and Guarino (2006), it is preferable to utilize separate one-way repeated-measures ANOVAs if the correlations are either too low or too high.

As for the qualitative data, the analysis procedures encompass a systematic and rigorous approach to making sense of the data collected in research studies (Miles & Huberman, 1994). In the process, researchers engage in a multifaceted exploration of the data to identify patterns, themes, and meanings embedded within the rich and contextually situated narratives. One common method employed in qualitative data analysis is thematic analysis, which involves systematically coding and categorizing the data to identify recurring themes and concepts (Castleberry & Nolen, 2018). This process often entails multiple iterations of reading and re-reading the data, followed by the creation of a coding framework to guide the identification and organization of themes. Additionally, techniques such as constant comparison and memo writing are often employed to refine and develop theoretical insights. Triangulation, member checking, and peer debriefing are employed as strategies to enhance the rigour and credibility of the analysis (Candela, 2019). Overall, the qualitative data analysis procedures provide researchers with a systematic means to derive meaning and

generate in-depth understandings from qualitative data, thereby contributing to the advancement of knowledge in various fields of study.

Specifically, according to Miles and Huberman (1994), there are three phases of a qualitative data anal. First, the data reduction, in that phase, the data are first prioritized, narrowed, sped up, and abstracted. Field notes or transcriptions go through this transformation procedure. Second, the data displays, are a condensed aggregation of information that enable inference from action. Lastly, in order to develop a meaningful conclusion, a conclusion drawing process is employed to use the emerging themes and categories from the data. For plausibility and conformability, it is essential to test the meaning that resulted from the data (Saldana, 2016).

Further, Saldana (2016) divides codes into first cycle codes and second cycle codes. The initial coding of the data is referred to as the "first cycle" of coding. Different methods (including grammatical, elemental, affective, literary, and linguistic, exploratory, procedural, and data theming) are used to code the data. After the first cycle of coding, the second cycle is carried out using analytical skills such as categorization, prioritization, integration, synthesizing, abstraction, conceptualization, and theory construction. Open coding, which is defined as "the process of breaking down, examining, comparing, conceptualizing, and categorizing the data," was the coding technique employed in the early coding process. (Kvale & Brinkman, 2009 p.202). Recurring themes and patterns were found while reading and rereading the transcription of the data. To make it easier to identify, a word or passage that was pertinent to the research topic was underlined, grouped, and labelled. Because clarity is the most crucial component for labelling, Microsoft Word's track change capability was utilized. After getting feedback the thesis advisor, and the interrater of the study (who is a PhD candidate in ELT), the changes made were followed up.

3.4.2.1 Reliability in Quantitative Research. While reliability describes the consistency or dependability of an instrument, including stability, internal consistency, and equivalence, validity relates to truthfulness, displaying how well it matches with actual reality (Neuman, 2014). In both qualitative and quantitative research, the types of validity that are most typically addressed include content, construct, internal, and external validity (Cohen, Manion, & Morrison, 2007). The use of scales such as the PERMA profiler (Butler &Kern, 2016) and the Immunity Questionnaire by Hiver (2017) essentially maintained content and construct validity in the current study. Additionally, the piloting

program was piloted first for 4 weeks and elaborated according to the feedback from the participants, finding from other studies in different majors and suggestions of the thesis monitoring committee.

Reliability is also significant in academic research to minimize errors when analysing survey results (Creswell, 2012). In educational environments, a test's internal consistency, which is typically assessed using Cronbach's alpha value, also known as the coefficient alpha, is referred to as reliability (Hayes & Coutts, 2020). Different Likert Type scales were used to acquire quantitative data for the current investigation. For each of these surveys, Cronbach's alpha value was calculated in order to assess their reliability, and it was discovered to be .77. According to Nunnally and Bernstein (1994), a Cronbach's alpha value of.70 or higher is considered acceptable. Thus, the reliability values of each questionnaire used in this study were satisfactory. As Lakens (2013, p.4) stated, statistical significance might be utilized to test the anticipated impact of any intervention while examining the quantitative data. The.05 level is regarded as the cut-off for statistical significance in the current study (p.05). It is important to describe the results regarding the measures of the magnitude of the intervention because statistical significance may be related to the possibility that the observed difference between the two scores could occur by chance, necessitating a researcher to determine the effect size of the observed difference (Funder & Ozer, 2019).

In the final analysis, test-retest correlations—which may refer to the repeatability between sessions obtained by the same instrument under the same circumstances—were calculated (Perinetti, 2018). These connections frequently act as helpful predictors of consistency over time. The Pearson Correlation Coefficient was employed to assess reliability for two tests.

Additionally, the test-retest reliability coefficient ranged from 0 to 1, with a very low value of 0.19 being considered to be extremely weak, a strong value of 0.06 being considered to be strong, and a very high value of 0.8 being considered to be very strong. As a result, there was a very high test-retest correlation for each scale. Details of each scale's normality tests, inter-rater reliability, and test-retest reliability were provided in appendix H.

In the following table, a summary of the tests run for the reliability of the questionnaires at all three stages of the study was presented, the following abbreviations are used:

PreTI = pretest teacher immunity

postTI = posttest teacher immunity

Delayedti = delayed posttest teacher immunity

PreTWB = pretest teacher well-being

PostTWB = posttest teacher well-being

DelayedTWB = delayed posttest teacher well being

Table 3

The Pre-Post and Delayed Reliability Scores of Immunity and Well-being

	PreTI	pTI	DelayedTI	PreTWB	PTWB	DelayedTWB
Alpha/α	.779	.765	.711	.741	.732	.740

According to data analysis, it is obvious that the reliability of all questionnaires is ascertained with p values larger than .7 for all cases in which the questionnaires (teacher immunity and teacher well-being questionnaires) were used.

3.4.2.2 Validity in Quantitative Research. PCA generates KMO or "Kaiser-Meyer-Olkin and Bartlett's test of Sphericity" table as the first table in the series of tables that are generated to give the readers and indication of sampling adequacy. For sampling to be considered adequate, the value for KMO statistic needs to be larger than .6. On the other hand, the Bartlett test examines correlations between the pairs of items in the correlation matrix. It is expected these correlations are not the same, however, the null hypothesis is that these correlations are the same. A p-value that is smaller than .05 helps us reject the hypothesis and meet the assumption. Bartlett Test, however, is not very important since because of the sheer number of participants its statistic is almost always significant or smaller than .05. The following table indicates that these two initial assumptions have been met in this analysis.

Table 4

Kaiser-Meyer-Olkin and Bartlett's Test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.722
Bartlett's Test of Sphericity	Approx. Chi-Square	3990.204
	df	510
	Sig.	.000

PCA generates some detailed tables, especially matrices that are difficult to represent in a Word spreadsheet. One of these huge tables is the correlation matrix. This matrix tells us whether the items in the questionnaire had a degree of correlation with each other or not. For FA or PCA to be conducted, the items need to correlate with each other to a degree but not too much. This assumption can be tested either visually by inspecting the matrix or by examining a determinant number that is given at the bottom of the table. The value of the determinant should be smaller than .00001 for this assumption to be fulfilled. The determinant value calculated for the teacher immunity questionnaire was p = .0000031, which is well below the required criterion.

Another table that is generated by PCA is the "commonalities" table. This table shows how much common variance is between each item and other items in the questionnaire after the factors are extracted. The initial assumption is that all items correlated with all other items perfectly. That is why all the values in the second column are 1. However, this assumption is far from reality, and it is only after extraction that the shared or common variance between each item and all other items is determined. Extraction is a procedure in which items loading on each factor are identified. This table is not very important in the sense that it does not tell us whether the loadings of the items on their respective factors are acceptable or not or which factors they load on.

The total variance explained is one of the most important tables in PCA. It tells us how many factors are extractable if we apply the Keyser principle of 1 eigenvalue for each factor or how much of the variance our factors would explain if we fixed the number of factors. In the case of this research, using either method bore similar results. Left to the program to extract factors with 1 eigenvalue or above, it extracted 9 factors explaining about 90% of the variance in the data and fixing the number of factors on seven, resulting in an extraction that accounted for close to 88% of the variance (Table 5).

Table 5

Factor Load Table for Total Variance

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.824	28.153	28.153	11.824	28.153	28.153	10.164	24.199	24.199
2	6.273	14.935	43.089	6.273	14.935	43.089	5.519	13.139	37.339
3	5.781	13.765	56.853	5.781	13.765	56.853	5.331	12.693	50.032
4	4.432	10.553	67.406	4.432	10.553	67.406	5.127	12.207	62.238
5	3.993	9.507	76.913	3.993	9.507	76.913	4.767	11.349	73.588
6	2.705	6.441	83.354	2.705	6.441	83.354	3.489	8.307	81.895
7	1.827	4.350	87.704	1.827	4.350	87.704	2.440	5.810	87.704
8	1.758	4.185	91.889						
9	1.443	3.437	95.326						
10	1.271	3.026	98.352						
11	.692	1.648	100.000						
12	2.046E-15	4.872E-15	100.000						

A scree plot is a schematic representation of the total variance explained table. In the figure in appendix D produced for this analysis, we can see the variables extracted, represented by the elbows or points of inflexions, and their sizes by the length of the lines between each two adjacent small circles. Elbows or points of inflexions are each indicative of one factor with an eigenvalue larger than 1. The following scree plot indicates that there are 9 factors, not considering the lowest point of inflexion. However, the lengths of the lines between a few of factors are not too much for them to be considered very important or as explaining much of the variance. The findings of this study provide compelling evidence supporting the decision to establish a fixed factor quantity of seven.

The rotated component matrix, another important table, shows items and the factors they load on. That table exhibits the left side columns first (starting with 1), as they are the factors explaining more of the variance and move on to the right side. In the process of factor rotation, it is common practice to exclude items with factor loadings below the threshold of .3. This is due to the rationale that items with loadings

below this threshold do not contribute significantly to the extraction of factors. It is noteworthy to observe that certain items exhibit loadings on multiple variables, as previously discussed. Another point is that the rotation method used to extract factors was varimax which can explain the maximum amount of variance in the data (See Table in Appendix H).

The researcher extracted seven factors and identified that cumulatively they explain (88%) of the variance in the data set. It can be asserted that our questionnaire demonstrates validity based on the aforementioned observations and analyses. However, two further steps can be taken to solidify this finding. One of these steps is to examine correlations between the extracted factors to make sure they do not correlate with each other very highly, which will undermine the claim that each of them represents a different factor. The other step is to inspect the first items that load on each factor to make sure that their content is relevant to the factor on which they load. The tabulated data demonstrates the intercorrelations among the extracted factors, revealing that no individual correlation exceeds a threshold of .8. It is pertinent to acknowledge that correlations surpassing this value raise concerns regarding multicollinearity, a phenomenon wherein highly correlated factors essentially measure the same underlying construct. Consequently, treating such factors as independent entities becomes conceptually untenable (See Table 6).

Table 6

Component Transformation Matrix of Extracted Factors

Component Transformation Matrix

Component	1	2	3	4	5	6	7
1	.846	.397	.247	.237	.015	.099	-.024
2	.473	-.517	-.518	-.175	.310	-.258	.219
3	-.210	.272	-.411	.618	.542	.182	.069
4	-.028	-.177	.040	.614	-.487	-.456	.379
5	-.060	-.372	.691	.160	.567	-.184	-.005
6	.089	-.541	.035	.245	-.208	.771	.014
7	-.066	.198	.151	-.261	.095	.232	.896

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

In order to proceed with the second step, it is imperative to examine the content of the first question and its loading on each factor. This pertinent information can be obtained by referring to the rotated component matrix. By consulting this matrix, one can ascertain the relationship between the specific question and its respective influence on the underlying factors being analyzed.

Factor one: item 5 (self-efficacy)

Factor 2: item 20 (coping)

Factor 3: item 29 (attitudes toward teaching)

Factor 4: item 11 (openness to change)

Factor 5: item 8 (resilience)

Factor 6: item 10 (resilience)

Factor 7: item 37 (classroom affectivity)

It is evident that the subscales of our questionnaire align quite closely with the extracted factors. However, it is worth noting that the initial items of factors 5 and 6 are grouped under the common category of "resilience." This occurrence is not unusual, as it is typical for questionnaires to possess certain limitations in terms of validity, resulting in occasional overlaps between factors and the items loading upon them. By carefully examining the majority of items associated with each factor, a significant correspondence becomes apparent, particularly with one of the subscales of the questionnaire.

Given the similarity in analytical approach, it is unnecessary to reiterate the validation of the well-being questionnaire, as it can be inferred that the findings obtained in the previous analysis extend to the validation of the well-being questionnaire as well.The following are the tables that show this state of affairs (See Appendix H for validity, reliability of scales). The table 7 exhibits how the new factors get together under seven themes.

Table 7

Total Variance of New Factors under seven themes

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.927	36.033	36.033	7.927	36.033	36.033	4.878	22.171	22.171
2	4.071	18.505	54.538	4.071	18.505	54.538	3.442	15.645	37.817
3	2.590	11.772	66.309	2.590	11.772	66.309	3.168	14.400	52.217
4	2.218	10.080	76.389	2.218	10.080	76.389	2.988	13.584	65.801
5	1.385	6.295	82.684	1.385	6.295	82.684	2.850	12.954	78.755
6	1.222	5.555	88.240	1.222	5.555	88.240	1.710	7.774	86.530
7	.952	4.329	92.569	.952	4.329	92.569	1.329	6.039	92.569
8	.615	2.795	95.363						
9	.542	2.464	97.828						
10	.313	1.421	99.249						
11	.165	.751	100.000						
12	1.803E-15	8.198E-15	100.000						

3.4.3 Trustworthiness in qualitative research. Ensuring the dependability and credibility of quantitative techniques, as well as the authenticity of qualitative methods, are key considerations in any research study. In qualitative research, trustworthiness is a key concern and can be established through methods such as prolonged engagement, persistent observation, triangulation, and member checking. The goal is to ensure that the findings accurately reflect the experiences and perspectives of the participants and the context in which the study was implemented. Moreover, interpretive methods can conduce to salutary understandings of the variability and complexness of personal strivings (Hefferon et al., 2017). Credibility, transferability, dependability, and confirmability are the four most well-known essential elements of trustworthiness that qualitative research must demonstrate, according to Lincoln and Guba (1985).

According to Lincoln and Guba (1985), several strategies, including prolonged engagement, persistent observation, data triangulation, researcher triangulation, peer debriefing, and member checking, could be employed to address trustworthiness. Credibility was operationalized in this study in a variety of ways. First, in terms of continuous engagement, the researcher had a long-term relationship with the participants in the environment and invested enough time to become familiar with the surroundings, and to understand the data in order to obtain rich data. The researcher was thoroughly aware of the characteristics of the participants and the institution because he was a seasoned EFL teacher and trainer. He could determine the truth of the situation and participants because he was familiar with it because of his pertinent background and experience working in state schools. The researcher had both emic and etic perspectives to be a participant and the research of the current study.

Through persistent observation, the researcher got the opportunity to find pertinent study topics and concentrate on them in detail thanks to her continuous observation. In order to "get distinct but complementary data on the same issue, triangulation was maintained by using a variety of data gathering modalities, such as interviews, written reflections, and field notes" (Morse, 1991 p.122). While method triangulation was accomplished by employing a variety of data-gathering techniques, including both quantitative and qualitative methods, investigator triangulation was ensured using two researchers for coding, analysis, and decision-making. Similar to member checking (Candela, 2019), which is described as the process of continual,

informal testing of material by eliciting responses from responders and checking if the findings of the researchers will be confirmed by the participants of the study.

Transferability is the ability to generalize an investigation, and it can be accomplished by giving detailed explanations so that the findings can be transferred to the sites of the researchers who are looking for them (Maxwell, 2021). For outsiders, other researchers, and practitioners in related EFL situations willing to duplicate the study to make sense, both the experiences and behaviours as well as the context were detailed in detail in this study using extensive descriptions (Hatch, 2002).

In terms of dependability, the researcher ensured rationality, and each research step was adequately recorded (Tobin & Begley, 2004). Readers could assess the research's trustworthiness by looking at the research methodology (Lincoln & Guba, 1985). One method of ensuring dependability is to establish an audit trail, which is used to report findings and publicly describe the research process. All relevant details on the characteristics of the participants, research setting, data collection tools, and data analysis techniques were presented in depth to show the dependability of the study. Throughout the course of the study, records of the research path were also kept, and the online courses were recorded to Zoom during the deployment process.

The purpose of confirmability is to demonstrate that the researcher's interpretations and conclusions are drawn from the facts, which is related to the objectivity of the research (Patton, 2002). Only once dependability, transferability, and trustworthiness had all been demonstrated, it could it be accomplished (Guba & Lincoln, 1989). As Farrell (2016, 2020) indicated, the researcher in this study intended to facilitate others' additional comprehension of how and why judgments were taken by providing reasons for theoretical, methodological, and analytical choices throughout the entire investigation. The researcher used reflective-weekly journaling and triangulation based on the collection of different sets of data to assure objectivity by removing biases and presuppositions (Creswell, 2012).

Data collection methods were triangulated in order to reduce bias and advance objectivity in this study. Additionally, the researcher recognized the importance of the researcher's position in qualitative research. By reiterating participant experiences and asking clarifying or iterative questions during the interviews, she attempted to remove biases and presuppositions. The participants were also sent member-checking emails

to confirm the interview transcripts, which further reduced bias. All the techniques described in the previous paragraphs were done to increase the trustworthiness and robustness of the current study. The findings from our research exhibit a robust intercoder reliability, a key characteristic that attests to the thoroughness of our coding process and the reliability of our data interpretation. The intercoder reliability was calculated using three different measures: percentage agreement, Cohen's Kappa, and percentage Agreement was 87.2% and Cohen's Kappa was 0.85.

The percentage agreement is an intuitive measure that directly communicates the proportion of agreement between the coders. In our study, it stands at a substantial 87.2%, indicating a high level of consistency between the coders. However, percentage agreement doesn't account for chance agreement, which is why we also employed Cohen's Kappa in our analysis. Cohen's Kappa is a measure that adjusts for the possibility of random agreement. The score of 0.85 in our study suggests that the observed level of agreement between coders is not due to chance, and it's categorized as 'almost perfect' agreement according to standard interpretation guidelines. This measure complements percentage agreement and reinforces the reliability of our coding process.

The high level of agreement between the coders, demonstrated by these three measures, lends credence to our thematic analysis and our findings concerning digital competence development among pre-service and in-service English language teachers. This consistency enhances the credibility of our research, bolstering the validity of our conclusions and recommendations. The minor discrepancy observed at one data point was reconciled through further discussion and reflection, showcasing the reflexivity inherent in qualitative research. Despite this minor divergence, the overall high reliability accentuates the strength and reliability of our coding scheme and the ensuing thematic analysis. The high intercoder reliability signifies the trustworthiness of our study and amplifies the potential of our research to contribute substantial insights to the field of educational sciences, particularly in the integration of digital competence in English language teaching. The use of multiple measures of intercoder reliability has helped provide a comprehensive view of the reliability of our coding process, further emphasizing the robustness of the study.

In brief, the data collection methods were triangulated to reduce bias and advance objectivity. The researcher also recognised the importance of the researcher's position in qualitative research. By reiterating participant experiences and asking clarifying or iterative questions during the interviews, she attempted to remove biases and presuppositions. The participants were also sent member-checking emails to confirm the interview transcripts, which further reduced bias. By employing these techniques, trustworthiness and robustness were ensured to increase the trustworthiness and robustness of the current study.

3.5 Ethical Considerations

Obtaining the Ministry of Education approval to conduct the study in a state high school was the first step to ensuring the ethical requirements (see Appendix G). Second, a consent form for voluntary participation that had been approved was given to the participants (see appendix C). Prior to the study, they read, inquired about, accepted, and signed the form. The consent form included information on the study's goals, participants' responsibilities, confidentiality concerns, and issues related to volunteering.

By protecting participants and the documents they generated from other parties' discovery, confidentiality was preserved. The digital versions of the data were kept in secure files while the paper versions were locked away. In addition, the researchers took several precautions to uphold ethical standards and safeguard the participants' rights throughout the data collection procedure. To begin with, they were able to show that they were committed to adhering to rules and regulations by obtaining permission from the Ministry of Education to carry out the study in a state high school. The research was submitted to the Human Subject Ethics Committee of the University. The research's goals, participant requirements, and concerns about anonymity and volunteering were all clearly stated in the consent form. Before willingly signing the form, the participants had a chance to read it, ask any questions they had, and be sure they understood the procedure. They were told they may stop participating in the study whenever they wanted.

3.6 Limitations

The present study has some limitations to be considered. First, the participants were humans who are impossible to standardize, and their personalities affect the results. Although it is a study with many sub-research domains, the intervention group was kept to 12 as the trainer wanted to provide and receive feedback every week to shape the intervention. The participants were mainly young female teachers working in state schools. Since the participants were predominantly young female teachers working in state schools, it is important to acknowledge that the study's findings may not be fully generalizable to other populations or settings. The small sample size of twelve participants in the intervention group was a deliberate choice made by the trainer to ensure regular feedback and tailored support throughout the intervention. However, this limited sample size may restrict the extent to which the results can be extrapolated to a larger population of teachers.

Moreover, the study focused on specific sub-research domains related to teacher well-being and its impact on academic achievement. While this allowed for a more focused investigation, it is crucial to recognize that other relevant factors or variables may exist that were not examined in this study. Therefore, the findings should be interpreted within the context of the specific research domains and may not provide a comprehensive understanding of the broader factors influencing teacher well-being and immunity. During the intervention three of the participants joined another course on action research and there was a cooperation among them because of the formalities of that course. Two of the PTs also cooperated on the preparation of E-Twinning projects which may affect the results.

Additionally, the study's reliance on self-report measures introduces the potential for response bias or social desirability effects. Participants may have provided responses they perceived as more favourable or aligned with societal expectations, potentially influencing the validity of the data collected. Future studies could incorporate objective measures or employ mixed-methods approaches to enhance the robustness and validity of the findings. Moreover, the researcher searched for the effect of the training on post-test scores, however, we did not have a chance to research the effect of training on teaching-skills which may be another limitation of the study.

Furthermore, the study primarily focused on the implementation and evaluation of specific interventions and activities, neglecting potential contextual or organizational factors that could influence teacher well-being and academic achievement. Factors such as school climate, leadership styles, and workload demands were not extensively explored, limiting the comprehensive understanding of the complex interplay between various variables.

To wrap up, while this study provides valuable insights into the relationship between teacher well-being and academic achievement within a specific sample and research domains, its limitations must be considered when interpreting the findings. Future research with larger and more diverse samples, incorporating multiple variables and considering contextual factors, will contribute to a more comprehensive understanding of the topic and could provide new insights into the formation of CPD programs.

Chapter 4

Findings

4.1 Introduction

This chapter presents the findings of the gathered data referring to each RQs. Before the results are presented, the reliability and validity calculations were presented. In the following section, first, the reliability and validity of the questionnaires were examined, and the researcher tried to check for the normality of the distributions of scores obtained using those questionnaires. To ensure reliability, Cronbach's alpha test is commonly employed, which sets a threshold of an alpha value greater than 0.7 for a questionnaire to be deemed reliable. The Cronbach's alpha test accounts for the intercorrelations among items and establishes a criterion that the coefficient of determination (square of the correlation coefficient) should exceed 0.5, indicating a value higher than r = 0.7.

To examine the validity of questionnaires, principle component analysis (PCA) was employed, which is a special case of factor analysis (Ringner, 2008). PCA and FA can be used to explore or confirm the loadings of items on their respective factors. Factor in this context refers to a cluster of items that are contributing to the same construct, usually a subscale of a questionnaire. The researcher used a 1-sample Kolmogorov-Smirnov (K-S) or 1-sample K-S test to see if the distributions of scores are normal. Normality is essential for deciding which type of test to use (parametric vs. non-parametric) or how to interpret the findings. For this measure to be acceptable, its significance value should be equal to or larger than .05, i.e., p => .05 (Sullivian & Fein, 2012).

4.1.1 Findings for research question 1. RQ1: what are the levels of teaching immunity and well-being in English teachers in Turkey? To answer the first research question which aimed to identify the well-being and immunity levels first, the descriptive statistics were run (See Table 8).

Table 8

Descriptive Statistics of Teaching Immunity

	N	Min.	Max.	M	SD
total teacher immunity	510	170.00	242.00	199.33	23.81

With 42 items in the teacher immunity questionnaire, each with seven levels, the maximum number that could be calculated for this attribute of English language teachers could be 294. Taking this into account and knowing that the mean for this attribute is around 200 among the surveyed teachers, while it could be 147 on average, it can be concluded that English language teachers in Turkey do not feel very insecure, even though the security level is far below perfect. This finding means that a lot of things need to be done to improve teachers' feeling of security because this is an integral part of being a dynamic and productive teacher. Feelings of insecurity might arise from different factors or policies that will be discussed in the discussion-conclusions section. The obtained results also indicated that the intervention employed has improved teachers' immunity slightly from 199 to 205 from pre-test to post-test and this increase has persisted through to delayed post-test. The standard deviations of the sets of data became narrower from pre-test to delayed post-test showing that the difference in the opinions of the responding teachers has levelled off to some degree.

The values of well-being statistics are somewhat similar to that of immunity. We had 22 items in the well-being questionnaire, each with ten levels. Therefore, the highest total score for each participant could have been 220. The averages or means obtained for the group of surveyed teachers in this study are given below in Table 9.

Table 9

Descriptive Statistics of Teacher Well-Being.

Descriptive Statistics

	N	Min.	Max.	M	SD
total teacher well-being	510	134.00	192.00	161.83	16.86

The obtained statistics indicate that, as in the case of immunity, there is still a lot of room for improving teachers' well-being. The results also indicate that the intervention has improved the surveyed teachers' feeling of well-being from pre-test to post-test and this feeling has become even stronger from post-test to delayed post-test. Likewise, the difference in the views of respondent teachers has become

significantly less at the post-test stage by shifting to 7 from about 17 and 16 in the pre-test and post-test to 7the in the delayed post-test.

4.1.2 Findings for research question 2. For RQ2 “What is the relationship between teacher immunity and teacher well-being in English language teaching?” To explore the relationship between teacher immunity and teacher well-being, the researcher conducted three path analyses by structural equation modelling (SEM). Wolf et al. (2013) described Structural Equation Model requirements and they suggested that the expected norm is to have 200 participants. Since the number of participants was 12, we could not offer a brand-new model yet, the interactions among the factors were explained.

For the purposes of the study, teacher immunity was designated as the independent variable and teacher well-being as the dependent variable. As all the variables utilized in the model were directly measured without any latent variables, any latent constructs were not measured in the analysis. It is crucial to note that one of the fundamental prerequisites for structural equation modelling or path analysis is that the fit indices of the model should reach acceptable levels. Commonly employed fit indices in structural equation modelling include, but are not limited to, the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSEA). These indices provide quantitative measures of how well the proposed model matches the observed data. The established benchmarks for these fit indices are as follows:

1. X (chi-square) > .05
2. RMSEA <.08
3. X/DF < 2
4. CFI > 9

By adhering to these established thresholds, researchers can determine whether the proposed model adequately represents the relationships among variables in the context of our study. It ensures that the model's parameters are estimated with sufficient precision and that the hypothesized relationships align well with the empirical data.

Evaluating the fit indices against acceptable levels is crucial in validating the structural equation model and enhancing the credibility of the findings derived from the analysis. To obtain a model with acceptable fit indices, the researcher deleted a couple of teacher immunity variable subscales (resilience and classroom affectivity) and added some covariance arrows. These changes were suggested by the software itself (AMOS 26). Teachers did not exhibit the feature of resilience and classroom affectivity at the pre-test but these two sub-domains increased post and delayed tests.

Even though, the researcher could conduct a simple Pearson correlation between these two variables at each stage to explore their relationship, using structural equation modelling has the advantage of helping us identify contributing and non-contributing subscales of the independent variable to this relationship. Likewise, the existing covariances between them could become clear. Figure 8 represents the immunity and well-being relationship using standardized estimates.

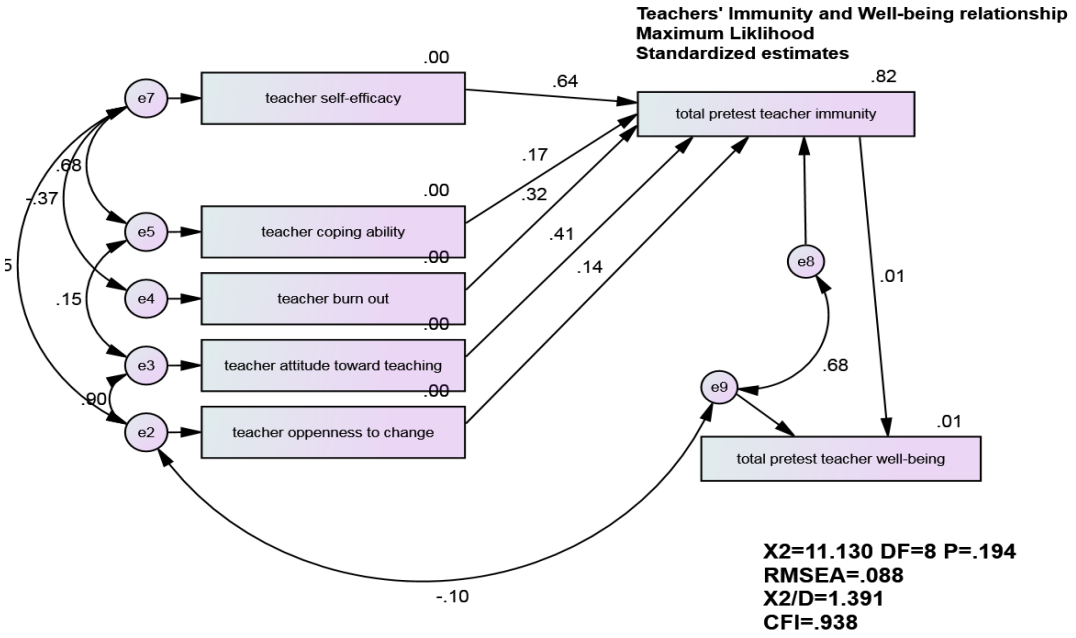


Figure 8. Teachers' immunity and well-being relationship using Maximum Likelihood Standardized Estimates (Pre-Test)

Regression weights on the arrows that move from teacher immunity to teacher well-being on each figure show that it is only at the post-training stage that teachers' feeling of well-being increases by 1.29 per unit of increase in teachers' feeling of immunity. At the pre-training stage, there is almost no effect and at the delayed-training stage, the relationship is negative by 2.55. The negative relationship means that an increase in the independent variable has resulted in a decrease in the dependent

variable. In other words, an increase in teacher immunity improved teachers' feeling of well-being (See Figure 9).

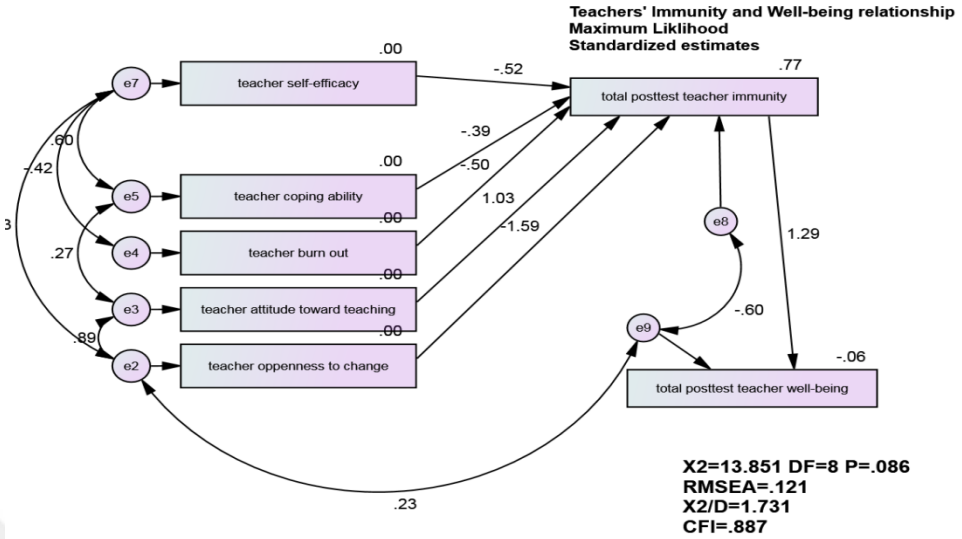


Figure 9. Teachers' immunity and well-being relationship using Maximum Likelihood Standardized Estimates (Total-Post-test)

Secondly, during the delayed-surveying phase, certain factors may have influenced the participants' responses, resulting in a potential decrease in the carefulness or attentiveness with which they approached the survey items. This could be attributed to participant fatigue stemming from the repetition of data collection or a diminishing novelty effect of the study. Furthermore, there may exist additional factors that contributed to this phenomenon, particularly considering that the delayed post-test data collection coincided with the occurrence of the Turkey earthquake, which could have negatively influenced the respondents' well-being and subsequently impacted their survey responses.

Nevertheless, the figure in Appendix H displayed in the analysis signifies an anomalous situation that calls for further investigation and deeper exploration. This unusual finding highlights the need for a more comprehensive understanding of the underlying factors that may have influenced the observed outcomes. It necessitates a thorough examination of potential variables and contextual factors that could shed light on this unique and distinctive pattern of results.

To wrap up, we can conclude there is a relationship between immunity and well-being. In posttest results, there was a steady increase in scores of well-being and delayed tests, the scores were diminished. The decrease might be attributed to the

earthquake in Turkey. The sharp increase in the post-treatment stage, it can be attributed to the participating teachers who were in the process of trying the ideas and as Peter Drucker once stated “what gets measured, gets improved.

4.1.3 Findings for research question 3. The research question was “What factors are influential on the development of immunity of English language high school teachers”?

To find out which factors are influential on the development of immunity of English language high school teachers, a multiple regression analysis was run with the subscales of the questionnaire as predictor variables and the overall immunity score of teachers as the outcome variable. It should be noted that the assumptions of regression, that is, sample size, multicollinearity and singularity, outliers, and normality of the residuals, were checked and all were proved to be acceptable. In terms of sample size, it is believed that there should be at least 20 participants per independent variable. We had 510 participants, which far exceeds this limit. Multicollinearity and singularity refer to very high or perfect correlations between independent variables. In regression, the researcher prefer not to have such correlations and fortunately, none of the correlations between the independent variables went beyond r = .8.

Considering outliers, it is deemed suitable not to have any participant who behaves radically differently. This assumption is checked by Mahalanobis or Mahal distance (whether there is an outlier) and Cook’s distance (whether the outlier is very influential). The value for the Mahal distance should be smaller than the critical value, in this case, 24.32 for seven predictor variables. The value for the Cook’s distance should be somewhere between ±2 regardless of the number of predictor variables. In the case of this analysis, the values for these two statistics were: maximum Mahal distance = 9.413 < 24.32, and Maximum Cook’s distance = 1.52 < 2. These findings can be examined in Table 10.

Table 10

Residual Statistic of Outliers

Residuals Statistics[a,b]

	Min.	Max.	M	SD	N
Mahal. Distance	2.140	9.413	6.417	2.438	510
Cook's Distance	.000	1.524	.590	.905	510

In the context of regression analysis, the concept of normality pertains specifically to the distribution of residuals surrounding the predicted scores of the dependent variable. This assessment is typically conducted through the utilization of P-P scatterplots, also known as probability plots. The expected criterion for a normal residual distribution is that the data points should align either directly on the line or exhibit close adherence to it within the P-P plot. Based on our analysis, it is evident that this assumption of normality has been satisfied (see Appendix H).

The results of this regression analysis are summarized in the following table. The subscales are organized according to the importance of their prediction ability. The ANOVAs were run separately on each predictor variable to determine each predictor variable (See Table 11).

Table 11

The Predictor Variables and Parameters of Teacher Immunity

Order of importance	1	2	3	4	5	6	7
Variables							
Parameters	coping ability	classroom affectivity	attitude toward teaching	self-efficacy	Resilience	openness to change	burn out
R	.807	.794	.748	737[a]	.678	.616	.191
ANOVA F & sig	18.730, .001	17.082, .002	12.666, .005	11.859, .006.	8.504, .015	6.125, 033	.377, .553
B	3.769	2.438	4.826	2.259	2.622	3.705	-.556
Beta	.807	.794	.748	.737	.678	.616	-.191
t	4.328	4.133	3.559	3.444	2.916	2.475	-.614
Coefficient sig	.001	.002	.005	.006	.015	.033	.553

A careful examination of the table also reveals that while, all of the significance values or coefficient sig values are smaller than .05, meaning that the prediction ability of the relevant subscales is significant, this value for burnout is non-significant. To figure out the prediction ability of each subscale we can look at the size of Beta, which is the standardized measure of B or slope of the regression line, also called gradient. R refers to the correlation of each subscale with the outcome variable. To find out which factors are influential on the development of immunity of English language high school teachers a multiple regression analysis was run with the subscales of the questionnaire as predictor variables and the overall immunity score of teachers as the outcome variable.

The results of this regression analysis are summarized in the following table. The subscales are organized according to the importance of their prediction ability. For the observant reader it immediately becomes clear that all important values decrease as we move from the left to the right of the table, but the values of coefficient significance increase in the same direction. The increase in significance values or p-values is attributed to the inverse relationship between the magnitude of this value and the perceived importance of our finding. In other words, a smaller significance value is indicative of a more noteworthy and significant finding. All these findings allow us to put the subscales in the order they are being put.

A careful examination of the table also reveals that while, all of the significance values or coefficient sig values are smaller than .05, meaning that the prediction ability of the relevant subscales is significant, this value for burn out is non-significant. To figure out the prediction ability of each subscale we can look at the size of Beta, which is a standardized measure of B or slope of the regression line, also called gradient. R refers to the correlation of each subscale with the outcome variable. Likewise, ANOVA conducted as part of the analysis provides us with evidence about the importance of each subscale. A recurring scenario in research involves the exposure of individuals to multiple conditions. In such cases, a common approach involves conducting a pre-test, a post-test, and a delayed post-test. When the necessary assumptions for parametric tests are met, repeated measures ANOVA can be employed to analyse data in situations of this nature. This statistical method allows for the examination of such scenarios, facilitating the comparison of multiple measurements within the same group or individuals.

In repeated measures ANOVA the researcher created a categorical variable, usually time, with as many levels as the number of situations our participants have been exposed to. We then fill in each time level with a set of data in the order that they have been collected and perform the analysis to figure out if the participants' performances or their opinions have changed significantly from the time one to time two, from time two to time three or from the time one to time three. A series of tables are generated when we request the software to do the analysis. The first table is the "within-subject's factors" table which specifies the name of the categorical variable and the stages of the dependent variable that has been entered into the equation. In the case of our analysis, this table would look like the following in Table 12:

Table 12

Dependent variables of within-subject factors

Within-Subjects Factors

Measure: stages

Time	Dependent Variable
1	TpreTWB
2	TpostTWB
3	TdelayedTWB

The table above display how the researcher abbreviated the term TWB (Teacher Well-Being), and the initial T represent the test.

4.1.4 Findings for research question 4. The research question was "What factors are influential on the development of the well-being of English language high school teachers?"

To answer research question 4, a regression analysis was made. Table 13 provides descriptive statistics for teachers' well-being at each stage of the study.

Table 13

Descriptive Statistics of Total Well-Being Scores

Descriptive Statistics

	M	SD	N
total pre-test teacher well-being	161.83	16.86	12
total post-test teacher well-being	180.75	17.68	12
total delayed post-test teacher well-being	185.16	7.32	12

The multivariate tests table indicates if there has been any significant differences. As the sig value makes it clear, there is a significant difference between the stages in terms of teachers' well-being with $p = .01 < .05$. However, this table does not mention the name of the categorical variable we created. To access this information, the next table was created. A point of note here is that all these tests do the same thing but use different methods. Prospective readers should not wonder why all calculated statistics are the same. In addition, the last column presents partial eta effect sizes, which serve as standardized measures of the observed differences. These effect sizes provide a standardized estimate of the magnitude of the observed effects or relationships. Using effect sizes, we can compare the findings of our study with the findings of other similar studies. It is almost impossible to compare studies with each other weren't there effect sizes, because each study has its own sample size and other

varying factors. See Table 14 for the effect size and partial eta squares of multivariate analysis.

Table 14

Effect Size and Partial Eta Square values of Multivariate Analysis.

Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
time	Pillai's Trace	.602	7.559[b]	2.00	10.00	.010	.602
	Wilks' Lambda	.398	7.559[b]	2.00	10.00	.010	.602
	Hotelling's Trace	1.512	7.559[b]	2.00	10.00	.010	.602
	Roy's Largest Root	1.512	7.559[b]	2.00	10.00	.010	.602

The table of "within-subject's contrasts" shows that the passage of time has significantly affected the participating teachers' well-being (See Table 15).

Table 15

Test of within-subject contrasts time-bound

Tests of Within-Subjects Contrasts

Measure: stages

Source	time	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
time	Linear	3266.667	1	3266.667	16.541	.002	.601
	Quadratic	420.500	1	420.500	1.419	.259	.114
Error(time)	Linear	2172.333	509	197.485			
	Quadratic	3259.833	509	296.348			

To precisely identify the specific areas of difference, we can employ three paired-samples t-tests. These statistical tests allow for a detailed examination of the variations and comparisons within the paired samples. The results of these analyses reveal that there have been differences between pre-test and post-test and pre-test and delayed post-test but not between post-test and delayed post-test (See Table 16).

Table 16

Repeated Measures of ANOVA test results among pre-test, post-test and delayed tests

		Paired Differences							
					95% Confidence Interval of the Difference				
		M	SD	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	total pre-test teacher well-being - total post-test teacher well-being	-18.91	25.22	7.28	-34.94	-2.89	-2.598	509	.025
Pair 2	total pre-test teacher well-being - total delayed post-test teacher well-being	-23.33	19.87	5.73	-35.96	-10.70	-4.067	509	.002
Pair 3	total post-test teacher well-being - total delayed post-test teacher well-being	-4.41	21.22	6.12	-17.90	9.06	-.721	509	.486

As with question 4, a regression analysis was conducted to answer this question. The assumptions of the test were met with maximum Mahal and Cook distances being equal to: 8.942 < 20.52 and 1.19 < 2, respectively (See Table 17) for calculations.

Table 17

The descriptive statistics of Residual Statistics of Regression

Residuals Statistics[a,b]

	Min.	Max.	M	SD	N
Mahal. Distance	1.159	8.942	4.583	1.925	510
Cook's Distance	.000	1.190	.220	.365	510

The normality of the residual distribution was also ascertained as shown in the following P-P plot.

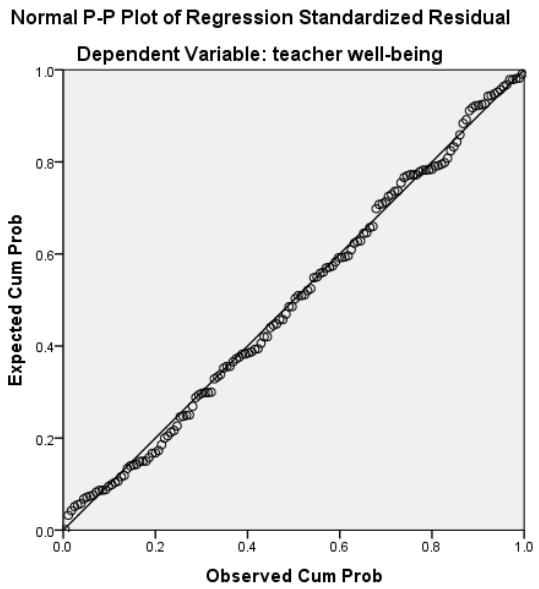


Figure 10. The P-P (Probability) of Plot Regression of Teacher Well-Being.

The results of the regression analysis are summarized according to the predictive ability of the sub-scales from the left to the right in Table 18. The leftmost variable has the highest and the rightmost variable has the least predictive ability. As it could be concluded, while relationship, accomplishment, and engagement are significantly predictive of the participants' well-being, meaning and positive emotions are not.

Table 18

Regression of Sub-Scales of Well-Being Scale (Variables and Parameters)

Order of importance	**1**	**2**	**3**	**4**	**5**
Variables	relationship	accomplishment	engagement	meaning	positive emotions
parameters					
R	.65	.64	.53	.58	.77
ANOVA F & sig	10.417, .001	7.961, .015	3.707, .030	2.031, .195	1.824, .358
B	2.611	2.064	.958	.475	.155
Beta	.542	.395	.329	.169	.097
T	6.111	3.365	2.833	1.458	.995
Coefficient sig	.001	.015	.030	.195	.358

The RQ4 is concluded here, the discussion of the results will be presented in the discussion section.

4.1.5 Findings for research question 5. The research question was "Are there any significant differences in the immunity of high school teachers in the pre-and post-training phases?" To answer the fifth research question which aimed to identify whether there are significant differences in pre-post training phases, the researcher collected data from 12 teachers in the intervention.

One-way Repeated Measures ANOVA is used when one group of participants' performances are measured more than two times at different time points during research. Therefore, repeated measures ANOVA tells us if participants' performances differed from each other along the time.

The first table generated in conducting RMA is the within-subjects factors table. This table only represents the continuous dependent variable (in this case immunity) and the dummy categorical variable "Time" that the researcher created to be able to conduct this analysis.

The second table is the Multivariate tests table. This table tells the reader if overall any difference existed between the performances or conditions in which the participants performed. It does not refer to the times or conditions under which the participants' performances were measured and therefore from table 19, the researcher doesn't know which dummy variable was used in the analysis. To know about this variable, the researcher needs to read the Within-Subjects Effects table that follows Mauchly's Test of Sphericity table.

It could be deduced that there has been no significant difference between the participants' performances. All four tests, which are the varieties of the multivariate test, point to this fact.

Table 19

Overall Differences in Participant Performances

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.
time	Pillai's Trace	.069	.371[b]	2.000	10.000	.699
	Wilks' Lambda	.931	.371[b]	2.000	10.000	.699
	Hotelling's Trace	.074	.371[b]	2.000	10.000	.699
	Roy's Largest Root	.074	.371[b]	2.000	10.000	.699

Mauchly’s Test of Sphericity is similar to the test of homogeneity of variances. The concept of sphericity in statistical analysis pertains to the assumption of equal variances among multiple measurements taken on participants' performances. When sphericity is satisfied, it implies that the variability in the observed data remains consistent across all conditions or time points under consideration. This assumption of sphericity is crucial in various statistical techniques, such as repeated measures analysis of variance (ANOVA) where it facilitates accurate estimation of the effects of independent variables. By assuming equal variances across measurements, sphericity allows for valid statistical inferences and ensures that the significance tests and confidence intervals obtained from these analyses are reliable and unbiased. Therefore, researchers should evaluate the assumption of sphericity when employing these statistical procedures, as violating this assumption can lead to inaccurate conclusions and misinterpretation of study findings. If the significance value for Mauchly is larger than .05, the assumption is met. In the table below, the reader could see that this assumption has been met with $p = .168 < .05$.

The table of Tests of Within-Subjects Effects represents which factor’s effects were exactly being investigated. In a sense it is a repetition of the Multivariate test but with more specification. From this table, the analysis data revealed that the impact of time, represented by the categorical independent dummy variable created, did not demonstrate a significant effect at the $p = .05$ level. This finding suggests that the variations observed in participants' performances across different time points were not statistically meaningful. The lack of significance indicates that the changes in performance over time, as represented by the categorical variable, were not significantly different from one another. It is important to note that this conclusion is based on our chosen level of significance and the specific statistical tests employed in the analysis. Thus, the non-significant result pertaining to the effect of time highlights the absence of a detectable influence of this variable on participants' performance in our study.

Table 20

Test of Within Subjects Effects of Immunity

Tests of Within-Subjects Effects

Measure: immunity

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Time	Sphericity Assumed	304.889	2	152.444	.576	.570
	Greenhouse-Geisser	304.889	1.539	198.107	.576	.530
	Huynh-Feldt	304.889	1.741	175.160	.576	.549
	Lower-bound	304.889	1.000	304.889	.576	.464

Finally in the last table, Tests of Within Subjects Contrasts, it could be specified that our model has been linear.

Table 21

Test of Within-Subjects Contrast of Immunity

Tests of Within-Subjects Contrasts

Measure: immunity

Source	time	Type III Sum of Squares	df	Mean Square	F	Sig.
time	Linear	240.667	1	240.667	.813	.386
	Quadratic	64.222	1	64.222	.275	.610

Following the same line of analysis, we understand that changes in the well-being of teachers from time 1 to 3 have been significant.

Taking into consideration what was said about the paired-samples t-test and its interpretation, it can be concluded that the difference between the pre-training and post-training teacher immunity after the training course has been significantly different to the advantage of the post-training group (M_{pre} =199.3, M_{post} = 205.3, "t" = 3.870, *df* = 509, p = .018 < .05).

4.1.6 Findings for research question 6. RQ6: Are there significant differences in the well-being of high school teachers in the pre-and post-delayed training phases? To answer the second research question which aimed to identify whether there are significant differences in pre-post training phases, the ANOVA tests were run.

Table 22

Multivariate Analysis of Well-Being Intervention Based on Time

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.
time	Pillai's Trace	.602	7.559[b]	2.000	10.000	.010
	Wilks' Lambda	.398	7.559[b]	2.000	10.000	.010
	Hotelling's Trace	1.512	7.559[b]	2.000	10.000	.010
	Roy's Largest Root	1.512	7.559[b]	2.000	10.000	.010

Table 23

Test of Within-Subject Effects of Teacher Well-Being

Tests of Within-Subjects Effects

Measure: TWB

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
time	Sphericity Assumed	3687.167	2	1843.583	7.466	.003
	Greenhouse-Geisser	3687.167	1.840	2004.309	7.466	.004
	Huynh-Feldt	3687.167	2.000	1843.583	7.466	.003
	Lower-bound	3687.167	1.000	3687.167	7.466	.019

Table 24

Linear Model of Repeated Measures of ANOVA

Tests of Within-Subjects Contrasts

Measure: TWB(Teacher Well-being)

Source	time	Type III Sum of Squares	df	Mean Square	F	Sig.
time	Linear	3266.667	1	3266.667	16.541	.002
	Quadratic	420.500	1	420.500	1.419	.259

Teacher well-being from time 1 to time 3 has significantly changed but to know about the direction of changes, which is if the changes have been for the good or the bad, it is essential to compare teacher's well-being mean values in these three time points. The last table represents the means of the participants in these three time points, and it is clear that the participants have made significant gains in their well-being all the way from time 1 to time 3.

Table 25

Total Pre-Post and Delayed Scores of well-being

	N	Mean
total pretest teacher well-being	510	161.8333
total posttest teacher well-being	510	180.7500
total delayed posttest teacher well-being	510	185.1667
Valid N (listwise)	510	

Well-being scores increased immensely in the post -test results and slightly increased in the delayed tests. As regards the ability of immunity sub-scales to predict teachers' well-being, the following tables show that neither in the pretest nor in the posttest and delayed posttest stages, teachers' immunity sub-scales were not predictive of teachers' well-being.

Table 26

Coefficients of Post-Test Teacher Well-Being.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	324.518	37.697		8.609	.001
	teacher self-efficacy	-.706	.918	-.310	-.768	.485
	teacher resilience	-.334	.863	-.116	-.387	.718
	teacher coping ability	-.309	1.397	-.089	-.221	.836
	teacher burn out	-.981	.595	-.453	-1.650	.174
	teacher attitude toward teaching	-1.960	3.043	-.409	-.644	.555
	teacher openness to change	-1.591	2.404	-.356	-.662	.544
	teacher classroom affectivity	.138	.746	.060	.185	.862

a. Dependent Variable: total posttest teacher well-being

For the calculations or effect of well-being variables on immunity (See: Appendix H). The only non-significant factor was the burnout. Teachers' coping ability had the highest standard error, which led the research to ask further questions in the third semi-structured interviews. Classroom affectivity as a domain of immunity changed vastly over the time. It could be thought in the intervention so in conclusions section, some suggestions will be made towards the integration of affectivity issues into pre-service teaching programs.

Table 27

Coefficients of Immunity Factors on Predicting Well-Being.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	164.001	21.968		7.465	.002
	teacher self-efficacy	.167	.535	.177	.313	.770
	teacher resilience	.232	.503	.195	.462	.668
	teacher coping ability	-.668	.814	-.466	-.821	.458
	teacher burn out	-.120	.347	-.133	-.345	.748
	teacher attitude toward teaching	-.715	1.773	-.360	-.403	.708
	teacher's openness to change	1.095	1.401	.592	.781	.478
	teacher classroom affectivity	.566	.435	.600	1.301	.263

a. Dependent Variable: total delayed posttest teacher well-being

The mean scores, standard deviation and Standard error of mean scores differed in pre and post results, it could be claimed that the intervention have a positive effect on the well-being of English teachers.

The paired-samples t-test conducted on pre-training and post-training teachers' well-being results revealed that the difference between these two stages has been different to the advantage of the post-training group (M_{pre} =161.83, M_{post} = 189.75, t = 3.698, *df* = 509, p = .015 < .05).

All in all, post-training and delayed training results had a positive effect on the well-being levels of English teachers.

4.1.7 Findings for research question 7. For the RQ six "What are the English language teachers' reflections about their well-being in the pre-test, post-test, and delayed post-test stages?

To understand the reflections of English teachers in the pre-test, post-test, and delayed post-test, semi-structures interviewed were analysed and thematic qualitative analysis was done.

Table 28

Findings Showing the Themes Regarding the Teachers' Determinants that Exert Influence on the Cultivation of Well-being

	Major themes	Sub-themes
Theme 1	Learner related	Students' behaviour
		Student motivation
		Student success
Theme 2	External elements	Attitudes of school leaders
		Collective well-being
		Financial incentives

Considering the importance of student behaviour, all participating teachers in the study underscored the importance of students' behaviour for cultivating their immunity. The following excerpts support this finding:

(…) We often get tired because of the communicative nature of ELT, but if the learners are willing to learn and well-behaved, I feel refreshed and satisfied at the end of the teaching day (PT3, Interview Data, 11.04.2023).

Teachers often feel satisfied if they work with self-motivated learners. It may be accepted as a privilege. The participant teacher stressed the importance of students' behaviour to learn and how it makes them feel refreshed at the end of teaching. Teacher 12 comprehended that" well-being is highly affected by our spiritual level; I mean doing something for our soul. Some people do yoga, and I pray five times a day" (PT12, Learning Diaries, 7.04.2023).

(….) "Mindful breathing techniques after a bad lesson to move to neutral gear and revitalise themselves for the next lesson (….) I love my learners as they are very motivated to learn, they will be prospective English teachers. They often learn in a self-directed way, and I help them in their journey to prepare for the University Entrance Exam (PT 5, Interview Data, 18.04.2023).

Mindfulness practices were coded as spiritual practices which trigger well-being. All the statements above regarding the students or learners could be categorised under theme 1 as "learner-related" factors. The participant teachers were all working in İstanbul which is a densely populated city with a high number of schools so teachers

can choose the school they want to work in, this is categorised under the school location. Table 29 displays the teacher well-being factors:

Table 29

The QUAL results for well-being raising or decreasing factors.

	Major themes	Sub-themes
Theme 3	Well-being raising factors	Job Security
		School location
		Collective well-being
		Spiritual beliefs and practices
		Increased noticing in teaching
Theme 4	Well-being decreasing factors	Peer bullying

(…..) At the beginning of the pandemic, I felt burnout because of my inability to use the technology, I learned the ease of using technology and I feel more able to use it now. I believe the new learning opportunities with a growth mindset make me more immune to teaching (PT7, Interview Data, 17.04.2023).

In line with the quotation presented, we can infer that the challenges English teachers explain could bring some expertise in using the technology. When the factors were asked that contribute to their well-being. One theme that was raised in learning diaries and interviews was "*job security*" for English teachers. They wrote:

"I know that I will for government school for another twenty years which makes me endure the challenges and become immunised, becoming immunised increases my well-being in return.*"* (PT5, Learning Diaries, 10.04.2023).

Considering this finding, some of the other teacher said: "Job security often gives us confidence; some teachers are lucky to work with eager and successful students." (PT10, Semi-Structured Interviews, 21.03.2023). Hence, job security and school proximity are described as eminent factors for well-being and immunity as well. The only negative theme, the researcher can deduce is the peer-bullying.

All in all, the analysis for RQ 7 unveiled that spiritual beliefs, the location of the school, and collective well-being policies assist English teachers to become more immunised. The findings section is concluded here, the findings are going to be presented in the same order of the RQs.

Chapter 5

Discussion and Conclusions

5.1 Introduction

The following section targets at discussing the findings of the study thoroughly in relevance to each research question. Each research question would be discussed in the light of findings and an extra discussion part will be presented because the study yield invaluable data which was not foreseen at the initial phases of the study.

In this part, each research question and its findings will be discussed concerning the other findings that are cited from other researchers.

5.1.1 Discussion of findings for research questions 1. For the RQ1 "What are the levels of well-being in high school English teachers in Turkey?" the mean score of well-being 160 out of 220 could be attributed to many factors. During the data collection, the world and Turkey underwent some economic crises. The average annual salary of teachers with 15 years of experience across 34 OECD member states was $44,600, while this number dropped to $28,110 in Turkey, an amount nearly one-fourth of what a teacher gets in Luxembourg, the OECD said in its annual education report titled "Education at a Glance 2022". This economic disparity could potentially contribute to decreased well-being among teachers. The results of the study underscore the urgency of nationwide efforts aimed at enhancing the well-being and resilience of K12 teachers, recognizing the importance of their role in the education system.

The findings could also be a liaison with the diversity and multinationalism of students in Turkey. In the last three years, Turkey has been accepting asylum seekers from Syria to be citizens of Turkey and teaching these learners has its limitations such as cultural gap, traumatized learners, low socio-economic background of these learners, and communication problems due to languages (Arslan & Polat, 2021). Another reason for low well-being could be linked to the pandemic conditions and earthquakes that affected some areas in Turkey which could be the focus of another study. There may be another reason for well-being which is the novice teachers that are appointed to the compulsory service areas and experience hardships in a fluid and ever-changing environment (Burger et al,2021). Numerous studies indicate that for teachers to effectively foster the mental well-being of their students, it is imperative to

establish a conducive educational setting (Acton & Glasgow, 2015). Two participating teachers had to visit and work in the earthquake area, which may increase their anxiety about their family members' health.

Teachers' ability to effectively carry out their responsibilities can be enhanced through the provision of safeguards, particularly in the face of the uncertain and volatile circumstances we encounter, including outbreaks, pandemics, and natural disasters. Teachers are expected to change or vary their mode of teaching in the ever-changing circumstances (Hodges et al, 2020). As a result, as demonstrated by O'Brien and Guiney (2021), language teacher who tried to improve their academic performance were more likely to attain better levels of success at work. These educators were eventually able to overcome their challenging circumstances and free themselves from emotional vulnerability. They will have teacher-empowerment with cognitive flexibility. We can conclude that practising English teachers should register for master programmes in ELT and learn how to improve their academic success in their workplaces.

All in all, low well-being and immunity could have many reasons, but the PP practices should be integrated into teacher-training programs and the curriculum that students need to study in primary and secondary school. If teachers can teach the ways of fostering well-being and happiness, they can experience the protege effect (Chase et al, 2009) to employ well-being practices more. In conclusion, the observed low levels of well-being and immunity among high school English teachers in Turkiye can be attributed to various factors such as economic challenges, the presence of multicultural student populations, pandemic conditions, earthquakes, and the experiences of novice teachers. Addressing these challenges requires the integration of positive psychology practices into teacher training and the curriculum, enabling teachers to promote their own well-being and that of their students.

5.1.2 Discussion of findings for research question 2. The second research question attempted to find out the relationship between teacher immunity and well-being in English language teachers.

The research could identify observable changes only in the post-training period of well-being. Nearly little influence is seen at the pre-training stage, and the association is negative by 2.55 at the delayed-training stage. In other words, a rise in

teacher immunity has not only not enhanced, but significantly thrived, teachers' feelings of well-being. As an occupation who often strives for others, the intervention might make them feel valued.

The findings suggested that well-being and immunity are highly related constructs and they feed into each other. PERMA scale provided valid estimations in the current study. According to the argument made by Morgan and Simmons (2021), the current model could be regarded as pertinent to the professional well-being of teachers in any educational setting. This model makes it more likely to determine how particular social and cultural values impact how teachers see and rate their students' professional wellness is impacted by their personal and career lives (Lamb & Wedell, 2015).

Some crucial patterns were revealed by the investigation of the connection between teacher immunity and well-being. The results showed that the idea of teacher immunity, which is defined as the capacity of teachers to adjust and sustain their well-being in the face of professional stressors and challenges, interacts with well-being in a complex manner depending on the timing and context of training. The findings proved that raising teacher immunity can greatly enhance their well-being. This immunity can be raised through professional development activities and welcoming school environments. These findings were consistent with the PERMA model's theoretical premises that well-being is primarily influenced by positive emotion, engagement, connections, meaning, and achievement.

The connection between teacher immunity and well-being, in contrast, was negative during the delayed-training phase and decreased for each unit of immunity rise. This implies that the process of establishing immunity may be stressful or difficult at first, maybe resulting in a brief fall in well-being. The well-being score may decline as the post-training euphoria wears off and the hard reality of applying new skills in a challenging, real-world classroom begins to set in. In the current study, classroom affectivity did not exist at the beginning, but post-test and delayed test results suggest that classroom effectivity increased significantly over time. The study of Gooran et al, (2022) unveiled that classroom affectivity showed a significant increase over time. To increase the affectivity of a classroom, English teachers may need time to get to know the learners and their backgrounds. After spending an ample amount of learning time together, teachers can build rapport with students.

These findings necessitate a rethinking of teacher professional development initiatives. They need to be planned as ongoing, supporting processes that create persistent growth in teachers' immunity and well-being, not merely as one-off activities that temporarily boost well-being. Immunity and well-being among teachers are strongly ingrained in the sociocultural circumstances in which they work, rather than merely personal psychological states. The approach put forward by Morgan and Simmons (2021) emphasizes how closely tied teachers' personal life and broader sociocultural values are to their professional well-being. Our research supports this claim by showing how the work environment and personal experiences of teachers interact dynamically with teacher immunity and well-being.

Overall, these revelations have important ramifications for Turkish and international teacher education and professional development policy and practice. Given the relationship between immunity in teachers and well-being, it stands to reason that measures to increase teacher immunity may also improve their general well-being, but the timing and setting are very significant to achieve their purpose. The researcher suggests that a course on PP may be an eight-weeks or longer course for participants to notice and learn may be a favourable option.

5.1.3 Discussion of findings for research questions 3. The third research question was, "What factors (burnout, job satisfaction, and self-efficacy) have an impact on the development of immunity of English language high school teachers?" The findings about RQ3 implied that only burnout is non-significant for the intervention results. It could have various reasons. First, the participants in the current study were relatively young teachers. Six of them were in the 20-30 age range, so they may not have experienced burnout. Burnout, as a negatively connotated construct, could be categorized because of service for a relatively long time, and it is disclosed as an ultimate result (Buonomo et al., 2017).

Likewise, the findings of the first research question, Turkish teachers had well-being levels above average, according to the research by Özü et al. (2017), compared to American, Turkish, and Pakistani English teachers. This could have varying reasons, such as the value of Turkish currency going down every day and buying a house or a car just to survive basic needs becoming impossible. At the post-stage of intervention, which is March 2023, an earthquake hit some major cities in the southeast of Turkey, and the participants, who are all based in İstanbul, began worrying about

being alive in the next earthquake that is possible in Turkey. The post-earthquake time may be a factor low level of immunity.

Schnaider-Levi et al. (2017) proposed if there are teachers in a school who are experiencing a degree of burnout, they should be supported by inquiry-based mindfulness techniques to replace negative emotions with positives. The other dimensions of immunity (self-efficacy, resilience, openness to experience, classroom affectivity, and coping) worked practically well in the current study. According to Wanberg and Banas (2000), readiness to change (openness to experience) is commonly defined as a person's psychological acceptance of structural or conservational changes. The policymakers should take into consideration that there may be some teachers in a CPD group who are not open to change, and their mediation into CPD may take longer time.

Due to the fact that the difference between the pre-training and post-training teacher immunity after the training course has been significantly different to the advantage of the post-training group. Similarly, post or delayed intervention scores of well-being significantly changed in the study of Dreer and Gouasé (2022). Using the activities, they learned in the training made them more confident in using PP techniques. However, all these implementations should be school-wide. It can be asserted that individual school types possess distinct characteristics and school cultures that necessitate teachers to adapt to varying conditions, thereby influencing their effectiveness (Chong et al., 2010). Teacher efficacy as confirmed by qualitative findings of the current study, is not an individual domain, rather it is shaped by contextual determiners. According to Duyen and Kelly (2022), six key components of well-being interventions that have been shown to be effective in raising teacher efficacy include participation by choice, the use of various methods, context-specific approach, grouping structure, qualified instructors, and weekly sessions.

The observation of significant changes in post-training scores in interventions can be attributed to several factors. Firstly, the training itself may have provided participants with new knowledge, skills, and strategies that positively impacted their performance. By acquiring and implementing these newly acquired techniques, participants may have experienced improvements in their abilities, leading to higher scores in post-training assessments. Rahm and Heise (2019) asserted that the cultivation of well-being among schoolteachers should be recognized as advantageous

for both the enhancement of individual health and the overall quality of teaching and learning. A viable approach to promote teacher well-being lies in the implementation of efficacious interventions, which could be executed on an individual basis, as part of group-based advanced training initiatives, or within the framework of comprehensive whole-school strategies. In a broader context, teachers generally place considerable value on intervention programs that provide support (Guskey, 2002).

Interventions often aim to enhance participants' awareness and motivation regarding the targeted outcomes. Through targeted interventions, individuals may become more attentive and focused on the specific skill and behaviours being addressed, leading to an increased effort and commitment to improve. This heightened dedication and concentration can result in observable improvements in post-training scores (Talati et al., 2018) as it is in this training. The conclusion that could be drawn is that kinds of positive psychology (PP) interventions should be spread over time such as 8-weeks for the participants to try and test the ideas they learned in the course. Moreover, the interventions typically involve an element of practice or application. Participants were encouraged to implement the newly learned concepts and strategies in real-world settings. Through repeated practice and application, participants could refine their skills, gain confidence, and demonstrate improved performance in post-training assessments.

Additionally, the supportive and structured nature of interventions can create a conducive environment for growth and development. The participants may receive feedback, guidance, and encouragement from trainers or facilitators, which can further contribute to their progress and subsequent increase in post-training scores. Intrinsic motivation may play a greater role in engaging PP practices in our classrooms as cannot be successful by external boundaries(Kunter et al., 2013)

Overall, the combination of acquiring new knowledge and skills, increased motivation and focus, deliberate practice, and supportive environments in interventions can lead to significant changes in post-training scores. These changes reflect the effectiveness of the intervention in facilitating learning and change among participants (Smith & Gillespie, 2007). Getting greater benefits from such non-cognitive training also depends on the social relationships in the school (Iqarashi, 2018). Some teachers might be innately introverted, but the professional development training at school should aim to help teachers to be more sociable in schools, making

exchanges with students or teachers. The PP interventions should take around 8 weeks to complete to get the incidents of higher scores in post-training, professional development programmes at schools should also teach social skills, learning social skills will increase the immunity and well-being of the teachers and result in significant improvement of teaching immunity. Although it is not on the immunity scale yet, teaching or exploiting high-order skills, in the long run, has proved to improve the self-efficacy, resilience, and professional success of teachers (Malmir & Mohammadi, 2018). When teachers reach "psychological saturation," they look for other chances to improve more.

The qualitative findings of the study opted out for the self-efficacy of teachers in dealing with the emotional problems of their learners; the participant teachers often cited their learners are having panic attacks in high schools, and the peer bullying rate is often high. Çevik et al. (2021) expressed that victimisation and peer bullying sometimes result in student burnout which also affects the English teachers' immunity level as they do not know what to do professionally about them.

To wrap up, for high school learning context, therefore, dealing with special students and circumstances should be one of the main pillars of CPD events. Teachers in the current study do not know how to teach bullied learners or learners with disabilities. When teachers reach the point of psychological saturation, they are going to find other ways of investing in their development in the profession and deal with burnout if they have any.

5.1.4 Discussion of findings for research questions 4. The fourth research question inquired factors effective on wellbeing. The findings suggested that while relationship, accomplishment, and engagement are significantly predictive of the participants' well-being, meaning and positive emotions are not.

Regarding the emotions, Herrera, Martinez-Alba, and Trinh (2023) discuss the ecological nature of teacher well-being in the context of ELT in their book. The ecological perspective is "a concept of community psychology in which a community (or any other social entity) is viewed in terms of the interrelationships among people, roles, organizations, local events, resources, and problems," according to the online dictionary of the American Psychological Association (n.d.) (para. 1). The three elements that affect EFL teachers' well-being are emotions in ELT, work-life balance

in ELT, and services-supports in ELT, according to Herrera et al. (2023). The current findings suggested that positive emotions do not predict well-being or immunity. Due to the fact that ELT encompasses all micro, macro, and mesosystems, these three criteria serve as evidence that teacher well-being is a socially situated notion. Teacher well-being includes many domains of life such as relationships, security, finance, health and other factors. In particular, teacher well-being is seen as a concept that is heavily reliant on human interactions.

It should be noted that the study did not discover a connection between well-being and two additional criteria, meaning or positive emotions. This suggests that although having a sense of purpose and having happy emotions may increase people's overall life satisfaction, they might not be as good predictors of overall well-being as involvement, quality of relationships, and accomplishment. These results highlight the need to take into account a variety of variables when examining well-being predictors and shed insight into the multidimensional character of well-being. To create more thorough therapies aiming at boosting people's well-being, more study is required to better understand the underlying mechanisms and potential relationships between these components (Pressman et al., 2020).

The findings of the current study revealed that meaning is not a predictor of well-being. Likewise, studies conducted in the United States of America offered that teachers' narratives lacked meaning, engagement, and accomplishment, which are also components of the PERMA framework according to Ross, Romer, and Horner (2011). The well-being of teachers should be an ecological concern, not just a personal one, in the opinion of Herrera et al. (2023). It is important to note at this point that for teachers and administrators to have meaningful and effective interactions at work, teachers must be clear about their needs when speaking with administrators during meetings. What is more, as a relatively aged theory, Seligman well-being theory (2014) was upgraded with some changes.

The current study deemed positive emotions as insignificant to predict well-being. Teachers often resonate with students' engagement and motivation and students' success on exams, collegial collaboration and support of respectful managers and supervisors. Teachers also welcome grateful learners to themselves. As the data collected from learning diaries suggest, they process the genuine feedback they received from their learners but not top-down positivity culture or positive emotions

which sometimes do not reflect the working environment. For teachers to succeed, Lake (2013) discussed the importance of good emotions in all teaching and learning contexts. Therefore, it should come as no surprise that EFL teachers are still working to control their emotions and work to become more positive to increase their well-being levels in the post-COVID-19 environment.

Gül (2023) conducted a master's thesis in Turkey and unveiled that studies that are done after the pandemic focused on factors such as workplace culture, social relationships, sense of meaning and purpose, teacher status, and physical well-being. While the studies were on negative emotions such as lack of motivation, workload, or low salaries. The studies dealt with engagement in online teaching and now the focus of PP scrutinizes the positive emotions such as workplace culture, positive emotions, or social relationships. The post-COVID-19 studies generally search the resilience or enduring strategies. However, it is unexpected in the study, the findings section does not predict the overall predictability of well-being.

Additionally, many factors play a role in the teachers' self-perception of their humour style which plays a crucial role in their teaching. Recently, Solhi et al. (2023) unveiled that teachers may possess varied student-perceived teacher humour styles (i.e., affiliative, self-enhancing, aggressive, and self-defeating) and our goodwill to teach cannot be perceived by some learners.

Teachers often continue their profession using their grit, coping strategies, or immunity as they may not have any expertise in other occupations to make their living in the Turkish educational context. As the results suggested, well-being is a domain or construct on which we can be fostered via using different interventions, changes in the life of teachers or through making managerial changes. The economic situation in the world with high inflation may have affected the teachers' well-being. The participants in the study narrated the extra-weekend jobs they do to earn more money, as the finding suggests their salaries do not currently compensate for their living expenses. Although there are unanticipated challenges in their profession, all the teachers did not behave in fight or flight responses for survival but rather they immunised themselves to challenges.

There is compelling evidence that school culture affects teachers' well-being significantly through personal characteristics that are also beneficial to teachers' well-being (Thien & Lee, 2022) through personal factors that are also effective on teachers' well-being. The workload is often found as a common theme in burnout or immunity studies (Karanfil & Khatami, 2021). Teachers who teach more than 20 hours weekly are prone to experience burnout, use fewer coping strategies and feel less resilient. School administrators should attach importance to workload distribution in their schools not to have teachers with burnout or even worn out (Abos, Haerens, Sevil, Aelterman, & García-González, 2018). A participating teacher described absenteeism. For some days, the teacher has to deal with private life or issues and gets medical reports. Tailoring the workload and teaching schedule is quite critical, workload should assist language teachers to be more immunised to teaching and sustain collective well-being.

In line with the findings in the current study, Pekbay (2021) also confirmed that demographic variables such as gender, type of school, teaching experience and age do not influence teachers' well-being. Kelly (2023) very recently published a book on school leaders' role in teachers' well-being. As well as, teachers affect the success of students, the performance and the success of teachers depend on the school leader's attitude towards learning.

Some participants talked about the low motivation levels of K-12 students but the higher motivation of adult learners. Older students' apprehension is balanced by reports of many older students returning to learning with very high motivation (Matsumoto, 2019). The implication is that teachers in mainstream K-12 schools teach regular classes. However, in public education centres, teachers work with older students who often have a rise in learning.

To summarize, some effective factors on well-being are already given in the PERMA scale, the role of the school leaders, workload, motivation of learners, using coping strategies, and ability to use technology are important facets of teacher well-being. These factors could be the variables of future studies.

5.1.5 Discussion of findings for research question 5. To examine if there is any significant difference in the immunity of high school teachers in pre- and post-training phases, based on the findings suggested that the mean scores of immunity

domain have increased in the PTs; this increase may be attributed to some factors. The conclusion we can make here is that an intervention course on well-being or mindfulness could make English teachers more immunised to teach and similar to each other, sharing common perspectives. The participants in the study often reported that they are now more resilient to teaching; in a similar intervention Malureanu et al. (2021) discovered that resilience is part of grit, and grit positively correlates with endurance, as the current study dwells on teaching immunity and well-being.

Due to the fact that the difference between the pre-training and post-training teacher immunity after the training course has been significantly different to the advantage of the post-training group. Similarly, post or delayed intervention scores of well-being significantly changed in the study of Dreer and Gouasé (2022). Using the activities, they learned in the training made them more confident in using PP techniques. However, all these implementations should be school-wide. It can be asserted that individual school types possess distinct characteristics and school cultures that necessitate teachers to adapt to varying conditions, thereby influencing their effectiveness (Chong et al., 2010). Teacher efficacy, as confirmed by qualitative findings of the current study, is not an individual domain; rather, it is shaped by contextual determiners. According to Duyen and Kelly (2022), six key components of well-being interventions that have been shown to be effective in raising teacher efficacy include participation by choice, the use of various methods, context-specific approach, grouping structure, qualified instructors, and weekly sessions.

The observation of significant changes in post-training scores in intervention regarding immunity can be attributed to several factors. Firstly, the training itself may have provided participants with new knowledge, skills, and strategies that positively impacted their performance. By acquiring and implementing these newly acquired techniques, participants may have experienced improvements in their abilities, leading to higher scores in post-training assessments. Rahm and Heise (2019) asserted that the cultivation of well-being among schoolteachers should be recognized as advantageous for both the enhancement of individual health and the overall quality of teaching and learning. A viable approach to promote teacher well-being lies in the implementation of efficacious interventions, which could be executed on an individual basis, as part of group-based advanced training initiatives, or within the framework of comprehensive

whole-school strategies. In a broader context, teachers generally place considerable value on intervention programs that provide support (Guskey, 2002).

Interventions often aim to enhance participants' awareness and motivation regarding the targeted outcomes. Through targeted interventions, individuals may become more attentive and focused on the specific skill and behaviours being addressed, leading to an increased effort and commitment to improving. This heightened dedication and concentration can result in observable improvements in post-training scores (Talati et al., 2018) as it is in this training. The conclusion that could be drawn is that kinds of positive psychology (PP) interventions should be spread over time, such as eight weeks for the participants to try and test the ideas they learned in the course. Moreover, the interventions typically involve an element of practice or application. Participants were encouraged to implement the newly learned concepts and strategies in real-world settings. Through repeated practice and application, participants could refine their skills, gain confidence, and demonstrate improved performance in post-training assessments.

Additionally, the supportive and structured nature of interventions can create a conducive environment for growth and development. The participants may receive feedback, guidance, and encouragement from trainers or facilitators, which can further contribute to their progress and subsequent increase in post-training scores. Intrinsic motivation may play a greater role in engaging PP practices in our classrooms as it cannot be successful by external boundaries (Kunter et al., 2013)

Overall, the combination of acquiring new knowledge and skills, increased motivation and focus, deliberate practice, and supportive environments in interventions can lead to significant changes in post-training scores. These changes reflect the effectiveness of the intervention in facilitating learning and change among participants. Getting greater benefits from such non-cognitive training also depends on the social relationships in the school (Iqarashi, 2018). Some teachers might be innately introverted, but the professional development training at school should aim to help teachers to be more sociable in schools, making exchanges with students or teachers.

All in all, the PP interventions should take around eight weeks to complete to get the incidents of higher scores in post-training, professional development programmes at schools should also teach social skills; learning social skills will increase the

immunity and well-being of the teachers and result in significant improvement of teaching immunity.

5.1.6 Discussion of findings for research question 6. The research question was, "Are there significant differences in the well-being of high school teachers in the pre-and post-delayed training phases?" The findings stipulated that there are differences in the levels of well-being increased in post and delayed data collection stages as the participants may have different levels of abstraction to the course content. There were significant differences which may be due to many factors. For example, most of the intervention programs were intense and time-compressed programmes based on a theoretical framework from positive psychology or targeting a reduction of stress/strain, as the results suggested these interventions should be done over a long time to absorb and reflect on ideas. Positive Psychology Interventions (PPIs) predominantly encompass concise activities that have been empirically demonstrated to elicit positive thinking, emotions, and behaviours (Lyubomirsky & Layous, 2013). In this study, the intervention is no different. It included elements of positive psychology. Therefore, wise future interventions ought not to primarily focus on enhancing the objective attributes of a given situation, such as increasing the number of teaching staff. Instead, their primary goal is to modify maladaptive interpretation strategies and transform how individuals engage with their environment (Walton & Crum, 2020).

5.1.7 Discussion of findings for research questions 7. The research question inquired about the English language teachers' reflections on their well-being in the pre-and post-delayed training stages and answers were gathered from semi-structured interviews and learning diaries.

The participating teachers of the current study complained about the difficulties of English language teaching which makes them tired at the end of the day they think that the other teachers do not need to consume as much energy as they do. Borg (2006) addressed in his seminal work that English language teaching stands apart from other academic subjects due to its unique characteristics. These distinctive features include the inherent nature of the subject matter, the emphasis on interactive teaching methods, the challenges encountered by students in comprehending and expressing themselves in a foreign language, and the necessity for extracurricular activities to create immersive learning environments (Borg, 2006). Still, they get their energy and

willingness from the student's participation again. When the learners participate more, teachers often feel their endeavours are valued by students. In line with the importance of "student behaviour" to shape well-being, previous researchers Drew and Sosnowski (2019) and Ahmed et al. (2018) findings indicated that students play a vital role in teachers' immunity and well-being levels.

The qualitative findings of the current study suggest that compared to large schools, small schools are more likely to foster a positive school culture because their students engage more personally and have a sense of community (Avalos-Bevan & Bascope, 2017) and teaching immunity is often underscored as a safeguard against the demands and expectations placed on teachers and the stress-provoking experiences that leads to emotional exhaustion and feeling worn-out. (Rahmati, Sadeghi and Ghaderi, 2019). A review of the literature indicates inherent links between the immunity of EFL teachers and their work involvement (Noughabi et al. 2020). Some participants in the study such as PT5 asserted that they do not have time to design creative activities. Different teachers have varied levels of work involvement which will result in divergent levels of immunity and well-being. The qual findings manifested that if the teachers plan their activities beforehand, they will be more contented about their teaching, which will increase their well-being.

Job security is also stressed in the study of Rahimpour et al. (2020), having a secure job increases teacher well-being, but the same conditions may not apply to private colleges. Age and experience are essential factors in identifying well-being, similar to the findings of compared to new teachers, experienced English teachers often reported greater happiness at work (Aral & Mede, 2018). This explains why some teachers younger than age 40 can have formed a half-immune type. As teachers gain experience, their coping, self-efficacy and resilience may increase. However, gaining negative experiences may also cause burnout or worn-out, negative attitudes towards teaching. In summary, collective well-being and school climate are important facets of well-being for practising teachers.

However, the self-reported findings in the current investigation may not elaborate definite results, the results are all personal. One PT accumulated that "*in our culture, we do not show our weaknesses rather we want to stay strong. Maybe well-being can be measured not with self-reflected methods…for space to less bias."* In a similar vein, Alves, Lopes and Precioso's (2020) study suggested contradictory results

as in the current study, teachers reported favourable views on their well-being, but quantitative results suggested the vice versa.

Spiritual beliefs and meditative practices foster well-being as underscored by Wills (2009); the saying goes that teaching is a sacred/holy job. This mindset may grow teachers' coping, and resilience as they do teaching duties for its own sake, for the passion of it. Last not but least, pandemic conditions need to be stressed, some participants stated that initially ERT (Emergency Remote Teaching) made them stressed out and they could not use technology such as the Zoom application, which made them feel stressed out, in time they fostered their capacities and become competent in handling the materials via technology. In contrast, Califf & Brooks (2020) described technology use during pandemic conditions as stressors which cause burnout and turnover intention. However, the findings of the current study proved that tecno-stressors turned into CPD opportunities for K-12 teachers.

To wrap up, there should be ample opportunities to join the interventions as a CPD activity. Therefore, joining the CPDs on affective factors may increase in-service teachers' awareness of their teaching. Having meaning, life aims or even hobbies are proved to be crucial in the current study. On campus pre-service teacher courses should provide a variety and teacher candidates should be allowed to choose the courses they are interested in. The current findings also confirmed that student behaviour is an eminent factor for teacher well-being. In this respect, we could offer that pre-service teachers should be given more training on classroom management and shaping student behaviour.

5.2 Conclusion

Teacher well-being and immunity, both significant domains for positive psychology are confirmed in this study to affect the students' learning and mood. Demographic variables in the current study and some other studies are not deemed to be influential factors but the school climate, salaries, working hours, and assistance from colleagues are. Although the current study is conducted with a homogenous group of teachers with top-down management in state schools, still school leaders play a critical role in the immunity of teachers and return for students' success.

Although some cultural clashes were identified as threats to their professional integrity and idiosyncrasies, the difficulties helped them to form their teaching immunity. Centring the well-being of teachers is now more important than ever a national and international priority due to the amount of teacher burnout and attrition we are currently experiencing in the field (Will, 2021) and predictably increasing due to global events, such as wars and pandemics (Sharifian &Kennedy,2019). Well-being is also a concern for academics, three of the teachers in the current study were following their MA courses and they talked about negative feelings they get from the university lecturers (Lashuel, 2020).

In the same vein, the participants in the current study suggested, happiness and productivity reciprocally increase the level of well-being. As we feed our physical bodies with food and nutrition, we should think about feeding our souls with practices of well-being which will increase teachers' productivity (Krekel et al, 2019). Teachers with 16-20 years of experience narrated the loneliness they faced during their initial years in the teaching profession. Since the first five years are accepted as a vulnerable time for teachers, they form their initial teacher identity(Davin et al., 2018). Teachers should be provided with facilities and privileges to socialize, engage in sports, or use their abilities for peer collaboration. Previous research has found that CDPs that induce changes in professional behaviours can aid to improve occupational well-being as long as the training is based on the needs of participants, in small groups of a maximum of twelve participants to make reflections in the training by providing links to their teaching circumstances as cited in (Corbett et al, 2021). The findings of the current investigation could form the basis to investigate the meaning and positive emotions in PP.

5.3 Pedagogical Implications

The current study aimed to shed light on the practices of those who are in the classroom as English teachers. The current research has demonstrated that collaborative, self-exploring conversations among peers are helpful in mental and emotional well-being. It can be concluded that not only students but also colleagues play a critical role in the well-being of a teacher, especially in the initial years of the profession.

Teachers must feel supported by having the opportunity to consider and improve their well-being and the support may be provided with a tiered presentation (Stafford-Brizard, 2021). For English language teachers to successfully achieve and maintain well-being, support must reach across the micro, meso, and macro systems. Working cooperatively amongst institutions, supervisors, and policies is essential because they all have a mutually substantial impact on teachers' well-being. Supervisors, organizations, and policies are responsible for assisting in the creation of environments that support English language teachers' well-being and must respect and support wellness. Additionally, laws that explicitly guarantee English language instructors' well-being ensure that their well-being is preserved and sustainable.

Additionally, the well-being of teachers could be emphasized through social connections in a minimal sense talking to the people around us who may be colleagues or even our ex-students. The present study has a reported increase in the well-being of the teachers, they sometimes focus on negatives (Braund et al,2019). Teachers should be trained on dealing with the negativity bias they experience in their profession. In the current research, the participants used learning diaries as a reflection tool for the intervention and their teaching and attributed it to be beneficial. For teacher development, video tagging tools might be used for teachers to gather their positive experiences (Sert, 2021) as the PTs find their learning diaries as an archive of their achievements. Besides, they can have a “jamais vu” which is doing something as if they have zero negative experiences in each area.

The researcher puts forward the following personal-level recommendations: Language teachers are advised to adopt several strategies to promote their overall well-being and maintain a healthy lifestyle. First, teachers must cultivate and sustain meaningful friendships by actively investing effort in maintaining regular connections with friends. Engaging in communities that align with one's values and passions is also recommended, as it provides a sense of belonging and fulfilment(Sampson,2022). Next, teachers can contribute to the welfare of others by donating money, time, or excess possessions to charitable causes and by performing random acts of kindness towards those around them. Engaging in challenging activities that require skill and promote a state of flow is encouraged. Furthermore, EFL teachers should be mindful of minimizing their participation in "fake fun" and "junk flow" activities that may provide temporary enjoyment but do not contribute to long-term well-being and

resilience. Teachers need to leverage their unique strengths and abilities within their current responsibilities to enhance personal satisfaction. Regular physical activity is essential, with a recommended daily commitment of 20-30 minutes of movement. Prioritizing duties and ensuring a minimum of seven hours of uninterrupted sleep each night contributes to the alignment of circadian rhythms for the following day. Furthermore, creating dedicated leisure time within one's schedule is vital for genuine relaxation. Finally, adopting the principle of "eating the frogs first" by tackling the most anxiety-inducing tasks at the beginning of each day can enhance productivity and reduce stress levels.

In brief, the aforementioned suggestions could be categorised into personal well-being. For collective teaching immunity and well-being, it is important to acknowledge the influence of protective factors embedded within the Finnish educational system on the complexity of teachers' occupational well-being and the quality of their interactions (Topp et al., 2015). For instance, within Finland, supervisory support often takes the form of servant leadership (Russell & Stone, 2002), which emphasizes a shared leadership approach and fosters the development of autonomy and capabilities among employees for their assigned tasks (Cann et al., 2020; Upadyaya & Salmela-Aro, 2020). This leadership style prevalent in Finnish schools can serve as a valuable social resource during teaching, facilitating high levels of engagement and resilience and mitigating job burnout among teachers

5.4 Recommendations for Future Research

This study offers some suggestions for further research. First future researchers, it would be worthwhile to study age/experience-related factors on well-being and immunity. A breakdown by total teaching experience would be feasible to find out and name coping strategies that English teachers use. The current study had an 8-week intervention face-to-face, so the participation was rather limited due to the post-pandemic conditions and future researchers may use larger samples to be able to come up with a model using a structural equation model. Further studies may also benefit from creating a new questionnaire using the quantitative findings of the current study which may appeal to the post-pandemic conditions we live in now. In undergraduate programs of ELT, this study may be replicated with pre-service teachers, the findings of such a study would be effective to find out whether positive psychology applications in undergraduate teacher education programs.

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