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EYLEM ARAŞTIRMASI YÖNTEMİNİN ÖĞRENCİLERİN FARKLI OTURMA DÜZENLERİ VE AKADEMİK BAŞARILARINA ETKİLERİ

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Pempe TÖNGEL

ÖZET

EYLEM ARAŞTIRMASI YÖNTEMİNİN ÖĞRENCİLERİN FARKLI OTURMA DÜZENLERİ VE AKADEMİK BAŞARILARINA ETKİLERİ

Bu çalışmanın amacı, yabancı dil olarak İngilizce öğretimi bağlamında eylem araştırması yönteminin öğrencilerin farklı oturma düzenleriyle ilgili algılarına ve akademik başarılarına nasıl etki edebileceğini açıklamaktır. Araştırmaya, Türkiye'de bir lisenin 9. sınıfında bulunan toplam 26 öğrenci katılmıştır. Katılımcılar 'uygun örneklem' yöntemi ile belirlenmiştir ve 15 hafta süren çalışmaya dahil edilmiştir. Grup çalışması ve akran öğrenmesi için yetersiz bulunan geleneksel oturma düzeni öğrencilerin tercihleri ve kişilik özellikleri dikkate alınarak değiştirilmiştir. Sınıfın düzenlenmesi ile ilgili olan eylem planlarının etkilerini araştırmak için karma yöntem araştırma yaklaşımı benimsenmiştir. Anket, gözlem ve yarı yapılandırılmış görüşme aracılığı ile nitel veri toplanmıştır. Ayrıca araştırmacı öğretmenin günlük kayıtları nitel veri kaynağı olarak kullanılmıştır. Eylem sırasında ve sonrasında gerçekleştirilen eleştirel yansıtma sayesinde öğrencilerin geleneksel oturma düzeni, arkadaş gruplarına göre oluşturulan küme oturma düzeni ve öğrenme stilleri dikkate alınarak oluşturulan küme oturma düzeni hakkındaki görüşleri incelenmiştir. Bu eylem-yansıtma döngüsünün öğrencilerin akademik başarılarına etkisi nicel veri sağlayan başarı testleri ile ölçülmüştür. Öğrenci ve öğretmen yansıtmalarından elde edilen nitel veriler Temellendirilmiş Kuram'a (Glaser & Strauss, 1967) göre analiz edilmiştir. Tüm nicel veri analizleri SPSS v 24 ile R v 4.1.1 programı altında "nparLD" kütüphanesi kullanılarak sürdürülmüştür (Noguchi et al., 2012). Öğrencilere uygulanan tekrarlı ölçümlerin analizi için F1-LD-F1 tasarımı uygulanmıştır. Çıkarımsal istatistikler Brunner ve Puri (2001) tarafından geliştirilen faktöriyel tasarımlarda parametrik olmayan boylamsal verilerin analizi yöntemi kullanılmıştır. Grup etkisinin, zaman etkisinin ve grup ve zaman etkileşiminin incelenmesinde sıralamalara dayalı varyans analizi (ANOVA) tipi istatistik kullanılmıştır. Çalışmanın bulguları, arkadaş gruplarına göre oluşturulan küme oturma düzeninin öğrencilerin etkinlikler uygulanırken ders dışı konular ile ilgili kendi aralarında konuşmaları ve eşit çaba sarf etmemelerinden dolayı elverişsiz olduğunu göstermektedir. Diğer taraftan, öğrenme stillerine göre belirlenen küme oturma düzeni öğrencilerin öz farkındalığını geliştirmiş ve akademik başarılarını artırmıştır. İstatistiksel analizler, oturma düzeni ve akademik başarı arasında bağlantı oduğunu düşünen öğrencilerin bunun aksini düşünen öğrencilere göre daha iyi bir akademik performans elde ettiğini göstermiştir. Eylem araştırmasının İngilizce öğretimi bağlamında yürütülmesi ve sınıfın düzenlenmesini yabancı dil sınıflarında etkili bir araç olarak kullanılması konularında yapılabilecek pedagojik çıkarımlar tartışıldıktan sonra önerilerde bulunulmuştur.

Anahtar Kelimeler: Eylem araştırması, Yabancı dil olarak İngilizce, Arkadaş grupları, Öğrenme stilleri

ABSTRACT

EFFECTS OF ACTION RESEARCH ON STUDENTS' DIFFERENT SEATING ARRANGEMENTS AND THEIR ACADEMIC ACHIEVEMENT

This study aims to shed light on the impact Action Research (AR) may have on students' perceptions of different seating arrangements and their academic performance in the context of English as a foreign language (EFL). An intact class with a total of 26 female 9th graders at a high school in Turkey participated in the study. Participants were selected through convenient sampling and participated in the study for 15 weeks. The traditional row arrangement, which was considered inadequate for group work and peer learning, was modified in light of the students' preferences and characteristics. A mixed methods research approach was used to examine the impact of action plans in relation to classroom design. Qualitative data were obtained through questionnaires, observations, and semi-structured interviews. Diary entries from the teacher-researcher were used as an additional source of qualitative data. Reflection in and on the action allowed for exploration of student perceptions of traditional row seating, group seating formed by friend groups, and group seating determined by learning styles. The effects of this action-reflection cycle on student academic achievement were measured quantitatively through achievement tests. Qualitative data collected through student and teacher reflections were analyzed based on the Grounded Theory (Glaser & Strauss, 1967). All quantitative analyses were performed in SPSS v24 and R v.4.1.1 with "nparLD" library (Noguchi et al., 2012). The F1-LD-F1 design was employed to analyze the repeated measurements administered to the participants. A rank-based non-parametric method developed by Brunner and Puri (2001) was used for the analysis of longitudinal data in the factorial design. An analysis of variance (ANOVA) type test statistic based on ranks (Brunner & Puri, 2001) was used to examine the group effect, the time effect, and the effect of their interaction. The results of the study showed that groups formed by friend groups were not favourable in performing activities due to side conversations and free riders. In contrast, groups determined by learning styles promoted students' self-awareness and improved academic performance. The results of the statistical analyses showed that students who believed that seating arrangements and academic achievement were related performed significantly better than students who believed the opposite. After discussing the pedagogical implications for conducting AR in EFL and using classroom arrangement as an effective tool in language instruction, suggestions for further research are made.

Key Words: Action research, EFL, Seating arrangement, Friend groups, Learning styles

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LIST OF ABBREVIATIONS

AR	: Action Research
AL	: Action Learning
AS	: Action Science
CS	: Case Study
EAR	: Educational Action Research
EFL	: English as a Foreign Language
ELT	: English Language Teaching
EPA	: Educational Priority Area
FGS	: Friend Group Seating
FTP	: Ford Teaching Project
GIST	: Girls into Science and Technology Project
GTC	: Grounded Theory Coding
HEC	: Higher Education Council
HCP	: Humanities Curriculum Project
LGS	: Learner Group Seating
MEB	: Ministry of Education in Turkey
RT	: Reflective Teaching
SBCR	: School-based Curriculum Reforms
the UK	: United Kingdom
the USA	: United States of America
ZAD	: Zone of Actual Development
ZPD	: Zone of Proximal Development

CHAPTER I

INTRODUCTION

The purpose of this study is to examine the effects of action research (AR) based on Jack Whitehead's (1989, p.43) AR model on different seating arrangements and academic achievement in the foreign language classroom. The introductory section provides background information and defines the purpose of the study including the research questions. The significance of the study is stated and then an overview of the thesis is provided.

1.1. Background of the Study

Education is a dynamic process, and the most fundamental change it has undergone is the shift from a teacher-centered[1] to a student-centered approach in the 1930s. Until this movement, education was influenced by the theory of behaviourism, developed by John B. Watson (1878-1958) and Edward Thorndike (1874-1949), which holds that behaviour is acquired through conditioning supported by reinforcement and repetition. The shift from a subject-centered to a learner-centered view has its roots in the theory of constructivism, based primarily on Piaget's (1896-1980) theory of cognitive development and Lev Vygotsky's (1896-1934) theory of social constructivism. According to Vygotsky (1978, p. 57), "*[e]very function in the child's cultural development appears twice: first on the social level, and later, on the individual level; first between people (interpsychology), and then inside the child (intrapsychology)"*. Sociocultural theory is also associated with work of later theorists such as Lave (1988) and Lemke (1990), the former of whom states that learning arises from the socially and culturally structured environment (Lave, 1991).

Like sociocultural theory, social cognitive theory proposed by Alfred Bandura (1986) emphasises the reciprocal relationship between individuals and their environment (Eun, 2018). It assumes that observing, modelling, and imitating behaviours and attitudes play an essential role in learning. In other words, social learning theory focuses on how both environmental and cognitive factors interact and influence human learning and behaviour (McLeod, 2016).

[1]The term "teacher-centered" must not be confused with "teacher-researcher". The latter is also teacher-centered, but in a democratic way, whereas in the former the teacher uses his authority in the classroom

In order to meet the demands of contemporary teaching and learning perspectives, the constructivist approach was incorporated into the curriculum by the Turkish Ministry of Education (MEB) in the 2004/2005 school year (Akınoğlu, 2005; Terzi, 2011). Although it was not clearly expressed, it can be said that the behaviourist theory influenced the Turkish curricula until this reform (Akınoğlu, 2005).

Hopkins (1996, p. 35) makes an analogy between schools and factories when the "*instruction is issued from the top – minister, chief education officer or head – like this: schools equate to factories that operate on a rational income and expense basis, pupils as raw material, teachers as machines, the curriculum is the productive process and school leaders as factory managers*". The commonality between behaviorism and top-down bureaucracy is that not only the content of the books but also the methods to be used were determined by authority. That is, the hierarchy decided what and how students learned.

The development of the term AR has gone through the following processes. Corey (1953) first used the term AR in education in America. Stenhouse introduced the "teacher as researcher movement" (Nixon, 1981, p.1, cited in Hopkins, 1996, p. 34). Carr and Kemmis created the term "educational AR" (EAR) (McNiff, 1995). Since then, the term AR or EAR has become widely used in all types of educational studies. Because AR is a teacher-based research approach in schools (Elliott. 1995), it places teachers at the center of the instructional, teaching, and search processes, but Pryor (1998) notes that adverse elements [social, cultural, etc.] interfere with teachers' ability to act as agents. For Elliott (1991), AR combines teaching and inquiry as a unique phenomenon in that it requires teachers to be researchers in their classrooms, and "collaboration" (Kemmis, 1985, p. 35) and "involvement" (Carr & Kemmis, 1990, p. 165) are important features of AR. Therefore, it can be stated that collaboration and involvement make classrooms student-centered. In this regard, Lancaster (2017) emphasizes that the student-centered approach focuses on students' needs, interests, and learning styles. With the goal of engaging students in the learning process, active learning and cooperative and collaborative learning became part of educational programs (Prince, 2004).

As a result, lecture-based courses have been increasingly replaced by courses that include activities to promote motivation and engagement, as it is believed that participation in group activities and social interaction enhance learning (Wang, 2006). To address this need, physical space has been considered as a component of the learning environment and studied in terms of pedagogy and learning (Perks et al., 2016). In fact, teachers gain experience through constant

interaction with their students and have the best knowledge of daily life in the classroom and its physical features (Hopkins, 1996).

In addition to basic classroom elements such as lighting, temperature, acoustics and colour, seating arrangement also affects students' learning experiences and behaviour (Lewinski, 2016; Manca et al., 2020). Research has shown that seating arrangements can promote active engagement and on-task behaviour, which are essential components of active learning (Clinton & Wilson, 2019; Wannarka & Ruhl, 2008; Yang et al., 2021). In addition, seating arrangement has a noticeable impact on classroom interaction and academic achievement (Downer et al., 2007; Haghighi & Jusan, 2011; Wannarka & Ruhl, 2008). It is an effective tool for promoting students' academic achievement when used effectively (Lewinski, 2016). To this end, this AR investigated the extent to which seating arrangements modified according to students' friendship groups and learning styles have an impact on foreign language learning.

1.2. Statement of the Problem

The main difference between AR and the traditional view is that the former emphasizes the role of learners in the learning process. Considering learner-centered teaching, language learning based on AR assumes that each person is unique in terms of abilities, needs, interests, and learning styles (Tomakin, 2001). According to Piaget's theory of cognitive development, children are not passive recipients of knowledge. Instead, they construct knowledge through experience and social discourse. Vygotsky's sociocultural learning theory explains that individuals learn through social interactions and collaboration. However, traditional teaching (Liu et al., 2006) and research (Bryant, 1995) approaches, which are authoritarian and non-collaborative, still dominate in educational institutions. It is worth noting that AR aims to improve practice and learning through collaboration among stakeholders (Fox, 2003); therefore, it was considered an appropriate research method for this study.

Based on the sociocultural learning theory and aware of individual differences, educators are increasingly advocating for teaching/learning contexts based on constructivist principles (Garrett, 2008) by emphasizing the need for supportive learning environments. However, the physical design of classrooms is primarily based on academic considerations (Gremmen et al., 2016), which often results in classrooms that are inappropriate for the chosen learning goals, such as promoting communicative skills in English as a foreign language (EFL). Traditionally, teachers determine where and how students sit (Kinahan, 2017), regardless of their preferences. The experience of the researcher of the present study has shown that row

and column arrangement in the classroom is almost the only type of classroom layout used by teachers in Turkish educational institutions, regardless of the subject or learning objectives. Tradition (McCroskey et al., 1978), concerns about classroom management (Gremmen et al., 2016), and the desire to transmit knowledge in a quiet classroom may be the main reasons for this preference. Indeed, this traditional classroom design limits student activity and increases focus on the teacher (Garrett, 2008). In addition, the needs and characteristics of the students tend to be ignored. Once a layout is chosen, few changes are made, and when they are, avoiding disruptive behavior and noise is the primary concern. Because of its impact on students' academic and social development (Farmer et al., 2011), it is not sufficient to consider seating arrangements in terms of classroom order. Research on seating arrangement suggests that students in the front rows are more engaged in class, while distraction and low academic achievement are common in the back rows (Benedict & Hoag, 2004; Granström, 1996).

Seating arrangement in the context of EFL was perceived as a problem by the teacher-researcher of the present study and identified as an under-researched area in Turkey, which is why it is the focus of this AR study. Since seating arrangements, if not effectively changed, have a negative impact on students' learning and participation, they need to be organised according to a certain logic and taking into account students' preferences and characteristics. Accordingly, the current study investigated whether not only the type of different seating arrangements but also the factors considered within these arrangements could play a crucial role in promoting learning in the EFL context.

1.3. Significance of the Study

Because of its interrelationship with classroom communication, seating arrangement affects foreign language teaching and learning (Harmer, 2007; Tosta, 2001). Seating arrangement is generally associated with classroom management; therefore, relevant research on this topic in the foreign language context is limited. Several empirical studies investigating the effects of classroom seating arrangements on students' on-task/off-task behavior and academic performance mainly compare row, horseshoe, small group, or semicircular seating arrangements in different contexts from a more general point of view (e.g., Anderson, 2009; Lotfy, 2012; Simmons et al., 2015; Philpott, 1993; Tobia et al., 2020).

As will be seen in Section 3.2, the review of the literature revealed that students do not sit according to any particular logic in these seating arrangements. Consequently, these studies

do not provide much evidence on the effects of seating arrangements when modified according to student preferences and characteristics. To address this gap, the traditional seating arrangement (i.e., in rows) in this AR study was modified according to friendship groups and learning styles. The effect of seating arrangement on student perception and performance was specifically related to EFL context.

In practice, teachers use the traditional row and column arrangement to transmit knowledge and promote order and discipline in the classroom. However, the physical form of the classroom directly affects learners' attitudes and motivation, and it is necessary to change the educational context according to students' needs and preferences (Kinahan, 2017). To this end, action plans related to seating arrangements were implemented following an action-reflection cycle (Whitehead, 2008). The findings and implications of this study shed light on how AR focusing on seating arrangements can affect students' notions and academic achievement in foreign language learning. Thus, the study is aimed at teachers who are looking for ways to address specific problems in their classroom contexts and improve practice by implementing AR in general.

1.4. Purpose of the Study

There are many types of seating arrangements such as row, group, semi-circular, or U-shaped arrangements, and teachers are often faced with making reasonable seating decisions (Gremmen et al., 2016). The physical layout of the classroom has a significant impact on student behaviour and learning (Denton, 1992). Therefore, in this study, seating arrangement was considered a key component of classroom learning to engage students in the learning process by creating a supportive learning environment.

This AR study was conducted using the case study method (CS) and focused on seating arrangements in the context of EFL. AR is a method that encourages stakeholders to actively participate in solving specific problems related to the context. Dörnyei (2011) states that AR is conducted by teachers to gain a better understanding of their educational environment and improve the effectiveness of their teaching. In view of the dynamic nature of human behaviour, action plans are produced and necessary changes are made to find the most effective method or technique related to problems in the educational context by focusing on students' needs and thoughts. Accordingly, the use of AR in this study and the implementation of action plans that include reflection in each action step enabled a deep understanding of the current situation.

According to Whitehead (2008), improving practice and generating knowledge is guided by the question, "*How do I improve what I am doing?*" The present study investigated whether AR could be a way to achieve this goal. In terms of the stages involved, Jack Whitehead's AR model was considered consistent with the research methodology of the present study (see Chapter 5). Therefore, as will be detailed in the next part (1.4.1.), the purpose of this thesis is to examine the effects of AR based on Jack Whitehead's AR model (1989, p. 43), which includes five stages (see Appendix D). Specifically, the study examined how students perceive different seating arrangements and academic performance in relation to traditional row seating and group seating in terms of friendship and learning groups. Qualitative data were obtained through observations, semi-structured interviews, and teacher-researcher diary entries. The impact of AR on student academic achievement was measured quantitatively through formal school testing, i.e., grading of test papers.

1.4.1. Research Questions

With the aim of investigating the impact of AR on students' perceptions of different seating arrangements and their academic performance in the context of EFL, the study was guided by the following research question, which is divided into a qualitative and a quantitative sub-question:

1. Does AR have an effect on EFL students' perceptions of different seating arrangements and their academic achievements?

1.1. What are students' perceptions of different seating arrangements in English courses? In terms of
- 1.1.1. traditional row seating (see Appendix A)
- 1.1.2. cluster seating according to friend groups (Appendix B)
- 1.1.3. cluster seating according to learning styles (Appendix C)

1.2. Do different seating arrangements affect students' academic achievement?

1.5. Structure of the Thesis

This thesis consists of six chapters. The first chapter is introductory and contains information about the background, purpose, and significance of the study. This chapter also provides an overview of the methodology and concludes with an outline.

The second chapter covers the theoretical framework of the study by providing an overview of AR. In addition, EAR and the model used in this study are presented.

The third chapter explains seating arrangements from a general perspective, followed by a section linking seating arrangements and language teaching. This chapter also includes a review of the literature on seating arrangements and discusses their impact on learning in different contexts.

In chapter four, friendship groups and learning styles are examined based on their relevance to the action plans of the current study AR. First, friendship groups are analysed in terms of collaborative learning in the EFL context. Then, learning styles are presented from a general perspective and in relation to language learning.

The fifth chapter outlines the research context and describes the research design in detail. The study procedure and the data collection instruments used to answer the research questions are presented. A detailed description of the data analysis process of the current study is also included in this section.

The sixth chapter presents the findings and results based on the research questions of the study. Data obtained through qualitative and quantitative analyses will be reported.

The thesis concludes with the seventh chapter, which summarises and discusses the findings and results of the study. The section on the limitations of the study includes the difficulties encountered. At the end of this chapter, conclusions and suggestions for further research are given.

CHAPTER II

ACTION RESEARCH

2.1. Introduction

The term AR is one of the most commonly used terms in research methodology. Researchers state that they used AR as a method in their research while teaching a specific topic such as grammar, vocabulary, listening comprehension, etc. (e.g., Ilin et al., 2013; Javier & Jubay Jr., 2019; Purba, 2020). Elliott (1991), an important representative of AR studies, states that AR combines teaching and research as a unique phenomenon. In this context, the question arises as to which part of AR is teaching and which part of AR is research. Similarly, we saw in the first chapter that the term AR underwent some changes in the teacher-researcher movement and the appearance of EAR.

Apart from these points, there are some terms whose meaning is similar to the definition of AR. These terms are reflective teaching (RT), action learning (AL), and action science (AS). In addition, "action cycles and action steps" are the frequently used terms and indispensable parts of AR studies. These two terms, i.e., the teaching part of AR and the research part of AR, are discussed in detail in the methodology chapter (see 5.3 in Chapter Five). Some AR studies conducted at the master's level do not mention what type of AR study it is - technical, practical, participant- and what model of AR – e.g., that of Elliott (1991) or Kemmis & McTaggart (1988) - was used. To clarify the above issues and explain similar concepts, this chapter begins with the origins of AR in the context of meaningful concepts and continues with an explanation of the types and models of AR. It is hoped that the literature review will provide the framework to show the type and model of this AR study.

2.2. Origins of Action Research

There are some names mentioned as founders of AR, namely Collier, Moreno and Lewin. John Collier, who was Commissioner of Indian Affairs from 1933 to 1945, is credited for his contribution to the development of AR (Neilsen, 2006). Because involving people in social change is an essential component of AR, Jacob L. Moreno, the pioneer of group psychotherapy and sociometry in the 1920s, can also be considered the founder of AR (Gunz, 1996). In the literature, however, it is believed that it was primarily Kurt Lewin who developed the theory of AR, which consists of a spiral of action steps (Masters, 1995).

The seminal AR studies on the development of AR are the Humanities Curriculum Project (HCP), the Ford Teaching Project (FTP), the Girls into Science and Technology Project (GIST), the School-based Curriculum Reforms (SBCR), and the Educational Priority Area (EPA) Project. The HCP focused on adolescent students' perceptions of controversial values issues such as war, gender, race, etc. It was found that there were differences between trained and untrained teachers (Elliott & Adelman, 1973). The FTP aimed to have teachers produce professional knowledge in their teaching through inquiry/discovery methods. As a result, teachers produced more reflective practice and pedagogical theories than HCP teachers (Elliott, 1991). The GIST project aimed to get female students to choose more science and technology subjects, and the idea for the GIST project came from outside the schools. (Kelly, 1985). The SBCR led to the widespread use of AR studies in the UK, and aimed to have teachers carry out actual practices in the classroom rather than serving abstract curriculum theories. This process made teachers producers of knowledge rather than imitators of others' knowledge (Elliott, 1991). The EPA project included small and economically underdeveloped mining towns around Liverpool, London, and Birmingham. It sought to raise educational standards, boost teacher morale, establish a home-school link, and help communities develop a sense of responsibility (Midwinter, 1972).

In short, AR studies have been conducted not only in education, but also in other settings such as insurance, prisons, hospitals, businesses, social services, and others (Cohen & Manion, 1996). There are about 392 AR studies registered with the Higher Education Council (HEC) Thesis Centre (URL-1). It seems that the AR studies conducted in Turkey had their objectives and research questions. They did not intend to investigate the origin or development of AR studies, and we did not in this study. The aim of the present study is to investigate different seating arrangements using AR.

2.3. Simply, What is Action Research?

The Industrial Revolution, taking place towards the end of the 18th century and continuing in the first half of the 19th century, led to social problems related to labour and migration in the United States of America (USA) and in Europe. Burnes (2006) notes that Kurt Lewin, considered the founder of modern social psychology, was concerned with improving the social organisation of communities, especially minorities, and emphasised that improving social issues depended on expanding democracy in society. Burnes also indicated that Lewin developed AR in the 1930s out of a belief that understanding social group formations and bringing about behavioural change are prerequisites for successfully resolving social conflicts.

Somekh and Zeichner (2009) emphasize the need for collaboration between theorists and practitioners, expressing that Lewin proposed AR as a method of collaborative inquiry to improve social relations, rather than using traditional research methods that rely on surveys and statistical data. Moreover, Lewin claimed that it is not enough to diagnose only specific problems related to social interactions and proposed to conduct empirical studies that include action steps that follow "*[…] a circle of planning, action, and fact-finding about the result of the action*" (1946, pp. 37-38). First, the planning phase is carried out cooperatively by the stakeholders by defining the situation and collecting data. The second phase involves actions related to the problem to bring about changes in behavior. The dynamic nature of human behavior requires flexible action plans. In the final phase, "fact-finding" takes place. In other words, action plans are reviewed and measured against goals.

Pioneering figures in the development of AR in subsequent years were Stephen Kemmis, John Elliott, Dave Ebbutt, Jean McNiff, and Jack Whitehead, as well as several others. The following section provides a brief overview of the definitions of AR. Kemmis and Mc Taggart (1988, p. 5) define AR as follows, focusing on participation and emancipation:

> *"Action research is a form of collective self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own social or educational practices, as well as their understanding of these practices and the situations in which these practices are carried out."*

Elliott (1991, p. 69) describes AR as *"the study of a social situation with a view to improving the quality of action within it and proposes that it is […] a resolution to the theory-practice issue"* (p. 53). McNiff and Whitehead (2002, p. 16) emphasize that *"it is a form of practice that involves collecting data, reflecting on action as represented by the data, generating evidence from the data, and asserting knowledge based on conclusions drawn from validated evidence"*." AR emphasizes participation and emancipation in a democratic context and is an inquiry *with* people, not *on* people (Altrichter et al., 2002).

AR is practical in that it intends "*[…] to improve practice rather than to generate knowledge"* (Elliott, 1991, p. 49). AR is a cyclical process based on self-reflection that aims to learn through action and reflection (McNiff & Whitehead, 2002). The focus of AR is on the social situation, practice improvement, self-reflection, action, and reflection. Elliott (1991, p. 60) points out at this point that Schön uses the term "reflective practice" ; however, Eliott calls it AR and claims that pedagogical AR emerged in the United Kingdom two decades before Schön's books. On the other hand, it is known that "*reflective teaching is also linked to Dewey"* (Gore, 1987). Now, in the next part, reflective thinking will be explained.

2.4. Reflective Thinking - Teaching

The term “reflexive thinking” is mainly attributed to two researchers: Dewey and Schön, and it is usually explained as follows: The concept of reflective thinking has its roots in John Dewey’s philosophy, which relates to education and involves analysis of the social and psychological nature of the learning process. Learning from experience, learning by doing, and reflection on action are fundamental elements of Dewey’s approach to learning. Dewey (1933, p. 3) defines reflective thinking as “*[…] turning a subject over in the mind and giving it serious and consecutive consideration”*. Schön (1983) expanded Dewey’s concept of reflection, noting that practitioners not only review and reflect on their actions, but also reflect in action as they do something. Schön defines reflection in action as a way of dealing with different situations in practice and making sense of unique situations, explaining that through reflection in action, someone becomes a researcher in the context of practice and is not dependent on established theories and techniques. Reflection in action refers to thinking about actions and events that have already been experienced (Schön, 1983). However, Adelman (1993) criticizes Schön's tendency to emphasize individual reflexivity as not promoting democratic participation. Adelman (1993) states that reflexive thinking in participatory research is the key element in finding ways to improve. In other words, reflection is a prerequisite for behavior change and learning in AR. AR itself is reflective in that participants analyze and develop concepts and theories in relation to their experiences (Altrichter et al., 2002). In short, teacher reflection can take place immediately at the time of teaching; that is reflection in action. However, it can also take place at a late time after teaching, which is reflection on action. Considering that reflection can occur immediately or later, and based on the notion that instruction can be improved through reflection (Bartlett, 1990), teachers should be researchers if they want to address students’ needs and interests, as the teacher-researcher of the present study intended in this AR.

Richards and Lockhart (1996, p. 1) state that teachers who adopt a reflective teaching approach “*collect data about teaching, examine their attitudes, beliefs, assumptions, and teaching practices, and use the information obtained as a basis for critical reflection”*.

According to Murphy (2001), there are three main goals of reflective teaching in the language classroom. The first goal is to better understand the teaching-learning process. Second, language teachers seek to increase their knowledge of strategies, and third, they seek ways to improve the quality of learning opportunities in the English Language Teaching (ELT).In conclusion, “*an integral part of reflective teaching is to learn to take action […]* (p. 499).

As mentioned in the introduction, the term "action" is also associated with Action Learning and Action Science. It is now time to briefly explain these in terms of AR.

2.5. Action Learning (AL)

AL, which is considered a form of AR, emerged around the same time as AR, and both methods have since been widely used for personal and professional development. The concept of AL was developed by Reg Revans and initially applied in the coal industry in the early 1950s (Bourner & Rospigliosi, 2019). AL has gained popularity in subsequent years, particularly in organizational and corporate development for developing leadership and problem-solving skills. In general, both AL and AR focus on problem solving, taking action, and reflection. AL has five elements: the group (people), the task (work to be done), the progress (strategy), the consultant (guidance), and the duration (project duration) (Margerison, 1994). AR, however, involves more systematic, precise, and verifiable processes and is made public (Zuber-Skerritt, 2001).

Another difference between AR and AL is that in AR, stakeholders are usually encouraged to define the problems and possible solutions themselves, whereas in AL, consultants or facilitators assist in conducting the investigation. In short, AL focuses on learning from experience and sharing experiences with others involved in the same action and aims at individual and organizational development in a cyclical process (see Appendix D). In practice, English teachers can learn not only from their own experiences but also from their colleagues and their experiences as they develop the habit of sharing and collaboration. To do this, they must become teacher-researchers who critically reflect on their practice.

2.6. Action Science (AS)

Argyris et al. (1985) coined the term AS and described it as "*an intervention method based on the idea that people can improve their interpersonal and organizational effectiveness by exploring the hidden beliefs that drive their actions*" (Raelin, 1997). Defined as another form of AR, AS emphasizes reasoning as a determinant of effective action. Argyris developed the ladder of reasoning, which includes a cycle of data selection, interpretations, inferences, and actions influenced by beliefs (see Appendix D). For example, in educational settings, teachers may examine the hidden beliefs of students who are less successful. After collecting appropriate data and making interpretations, they can take appropriate action.

It can be inferred that AR requires teachers to be researchers. RT can be related to learning by doing. AL means learning from the experiences of others, and AS explores the drives behind

actions. Whether AR, AL, AS or RT, all require some kind of research and can be considered forms of AR. At this point, the following questions arise: What kind of research is it? and How should it be conducted? In quantitative research, there are experimental and control groups, but AR has its own different models and types. In the next part, the types of AR are introduced and the type of AR I used is explained. The following section (2.8.) introduces both the main AR models in the literature and the model used in this study.

2.7. Types of AR

In this part, the types of AR are briefly described and the reasons for the present study are explained. Namely, some of the AR studies conducted in Turkey do not provide information about what type of AR was used (Korucu, 2011, p. 53; Çetin, 2013, p. 26). In the first study, it is stated that it is an AR study where the "*case study method*" was used and the data were analysed qualitatively. The second study states that it is "*an AR project, … decided to use a collective case study*" and the data were analysed qualitatively. The above two studies do not provide further information about whether they are diagnostic AR, participant AR, technical AR, or practical AR. Therefore, it may be useful for prospective teachers and researchers to be aware of the following types of AR. Adelman (1993) offers "*Lewin and his workers'* classification of AR that emphasises process rather than outcome. Depending on the goals of the research, AR can be conducted in the following ways:

1. Diagnostic AR is applied to problematic situations. It involves diagnosing the problem and recommending remedies. Researchers make recommendations, but the client group may not put them into practice.

2. Participant AR emphasizes the participation of the groups involved in the situation. It is based on collaboration throughout the process, including decision making. By involving related groups, feedback can be provided that can have a positive impact on the results of the study.

3. Empirical AR focuses on implementing action plans and recording results. Hypotheses are made and evaluated against the results. The lack of a control group and reliance on the experiences of a single group are the weaknesses. Nevertheless, it seems to be more elaborate than the aforementioned types of AR.

4. Experimental AR aims to test the effects of different techniques. Hypotheses are tested on control groups and conclusions are drawn. It is a controlled study whose results can contribute to scientific knowledge.

In addition to the above types of AR, Carr and Kemmis (1986, cited in Kemmis, 2009) classify AR by purpose and intent as follows:

1. Technical AR aims to improve control over outcomes and is concerned with the efficiency of methods and techniques applied to problematic issues by testing the feasibility of the results of previous studies. It can be deduced that the technical AR has some similarity with the experimental method, which aims to measure the effect of actions.

2. Practical AR differs from the technical AR in that it gives participants a voice throughout the study. Indeed, the primary focus is on the professional development of practitioners. Given the emphasis on collaboration among participants, it is possible to say that this definition has similarities to that of participant AR.

3. Critical AR is conducted collectively and aims to empower participants through emancipation from exclusion and injustice. The focus is on improvement through exploration of social realities and consideration of the social context. Considering that teachers have to follow a fixed curriculum, it seems quite difficult to apply this kind of AR to educational institutions.

Consequently, AR is a necessity in education to address students' needs and interests and to improve practice. Because of the importance of purpose and intent, it is also critical to identify and describe the type of AR used in studies. In this context, considering the research questions and research method, the present study can be classified as both a practical and empirical AR study based on the above classifications.

2.8. Models of AR

Since its emergence in the 1930s, various AR models have been applied in different contexts, from schools to hospitals and other communities. One such model (see Appendix D), which is based on Lewin's original theory of AR and involves repeated cycles of planning, acting, observing, and reflecting to improve educational situations, was proposed by Kemmis and Mc Taggart (1988). In the same context, Çetin (2013) first refers to Kemmis and McTaggart's model of AR – planning, acting, observing, and reflecting – and later explains that Burns' (2009) 'action research formula' was used to guide the study. In fact, these action steps are already included in Kemmis and McTaggart's (1988) AR model. To familiarise the potential action researchers with the prominent action researchers and their models, this section (2.8.) is included. The figures related to AR models can be found in Appendix D.

Elliot's (1991, p. 71) AR model begins with identification of an initial idea, followed by fact gathering and analysis. Action steps corresponding to the general plan are implemented and monitored. After assessments, the general idea may change, and the general plan is revised as needed before new action steps are planned and monitored.

Somekh's (1989) and McBride's (1995) model of AR is similar to the qualitative research approach and includes the cycles of establishing a focus, data collection, data analysis and hypothesis generation, planning and implementing action steps, and data collection and monitoring. The next cycle is planned after analysis and evaluation.

Review of the literature on AR revealed that there are several other models of AR (e.g., Cohen & Manion, 1996; Ebbutt, 1985; Mcniff, 1995; Wallace, 1998). A review of all these models is impractical due to space and time constraints. Therefore, because of its relevance to the purpose of this study, Jack Whitehead's model AR is presented.

2.9. Jack Whitehead's AR Model

This AR is based on Jack Whitehead's (1989, p.43) model of action reflection. Whitehead (1989) stated that improving practice is closely related to the question, "*How do I improve what I am doing?*" Beginning with the identification of a practical problem, action plans are determined and put into practice. After an action plan is implemented, observations and reflections are made. Depending on the results of the reflection phase, the necessary changes and modifications are made for the next action step (Ivankova & Wingo, 2018).

This model, adapted for its relevance to the aims of the present study, suggests that action is accompanied by continuous interaction and modification of the ongoing situation (Shrestha, 2021) by incorporating living theories generated by practitioners (Whitehead, 2017). In other words, the teacher-researcher is encouraged to draw on his or her values and experiences and aims not only to improve student learning, but also to improve his or her own learning through an emphasis on "I" and self-inquiry. Whitehead's model of AR is based on action-reflection cycles (Whitehead, 2008), which include the following stages:

- I experience a problem.
- I imagine a solution to my problems.
- I act in the direction of my solutions.
- I evaluate the outcomes of my actions.
- I modify my problems/ideas/actions..., (these five steps make one cycle) (Whitehead 1989, p.43)

Suffice it to say that some more information about the action steps and action cycles of this study is provided in the methodology section (see Chapter 5).

2.10. Summary

A critical review of the literature AR has revealed that, despite the many AR studies in education, some points should be summarized:

* The prevailing opinion about the originator of AR is still Lewin, although other names (Collier, Moreno) have been cited in literature. This study did not intend to prove who was the first.

* We have seen that there are different names under the title AR, such as AS, AL and RT, but the term AR has unfolded its function as a teacher-researcher movement and EAR while others have not. Therefore, this study has sided with AR and the teacher-researcher movement.

* There are several types of AR in the literature, but some studies do not mention which one was employed. Therefore, it seems useful to inform the readers about the types of AR that can be used.

* AR has its own models in addition to the quantitative research model. Researchers must not confuse the model and its originator with someone else's model.

* Since the researcher has experienced "traditional row seating" as a problem for years, Whitehead's (1989) AR model was used, which begins with "I experience a problem".

* Teachers are researchers in their classrooms (Stenhouse, 1985)

* AR aims to unite theory and practice (Elliott, 1991).

* AR is teaching and researching at the same time (Elliott, 1991).

In fact, traditional row seating is not only a problem in this research context, but also in most classrooms. The next chapter will therefore set the scene. Although the types of seating arrangements were the solutions we devised, it seems necessary to review the literature on seating arrangements in general and in ELT before providing specific information and rationale for applying two different seating arrangements in the study.

CHAPTER III

SEATING PATTERNS AND RELATED LITERATURE

3.1. Introduction

Seating arrangement affects student behavior, participation, and academic achievement (Higgins et al., 2005; Picchierri & Guido, 2016). In order to use seating arrangements as a means of influence, teachers need to know the characteristics and benefits of different seating arrangements. For this reason, this part first introduces the traditional, cluster, horseshoe, and herringbone seating arrangements. Then, the seating arrangements in the language classroom will be explained with examples from the researcher. Finally, a review of the literature is provided to show that, to our knowledge, a study such as ours has not yet been conducted. The following descriptions include the most common seating arrangements, except for the less common ones such as cabaret, banquet, and T-shape.

3.2. Types of Seating Arrangements

3.2.1. Traditional Row Arrangement

Traditional row seating consists of rows and columns, and students usually sit in pairs in rows from the front desk to the back desk. Multiple desks in a row form a column, and there are usually two or three columns in a classroom (see Figure 3.1). This row seating is the most common type of classroom layout at all educational levels in the research context and in Turkey. The study started collecting data during the row seating because the pre-stage of AR needs to be explained to show the difference in the post-stage of AR (Ebbutt, 1985). In this context, the data collected during this period can be called fieldwork (pilot study).

This arrangement has some advantages and disadvantages, as we will see below. Since all students face the teacher, most of the communication is between teacher and student rather than between student and student (Yang et al., 2021). Basically, the pedagogical environment in this arrangement is teacher-centered and topic-oriented. The traditional row arrangement facilitates knowledge transfer by minimising disruptive student behaviour (Hastings & Schwieso, 1995; Harmer, 2207). Row arrangement is beneficial for individual work and on-task behaviour (Gremmen et al., 2016; Wannarka & Ruhl, 2008). On the other hand, this arrangement is disadvantageous in terms of collaboration and social interaction. That is, students are more passive listeners and the teacher's role as authority in the classroom is

emphasised. In addition, back rows are not conducive to engagement, which demotivates students in the long run (Falout, 2014).

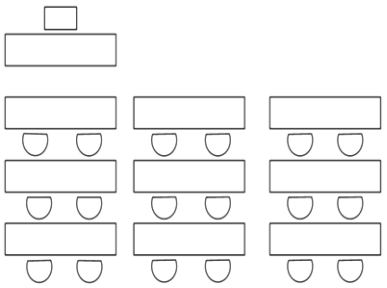


Figure 3.1 Traditional row arrangement

3.2.2. Cluster Seating

Cluster seating typically consists of two desks or tables placed together and allows students to sit in groups of four, as shown in Figure 3.2. Because this seating arrangement creates a supportive learning environment by encouraging collaboration and social interaction (Fernandes et al., 2011) instead of classroom competition, we used this seating arrangement as an action plan in two cases to measure the effects of friendship and learning style. That is, close friends sat in a group and eventually seven groups were formed in the classroom. This was the first action plan. The second action plan was to group students according to their learning styles. This study was based on the belief that an awareness of student characteristics and a seating arrangement that follows a certain logic can prevent off-task behaviour and distraction. Sections 5.7.2. (sociometric mentions) and 5.7.3. provide more information about the clusters.

In this type of seating the teacher is able to give instructions to small groups while other students are working on their own studies (Harmer, 2007). Besides, the students can ask questions easily during these small group works as the teacher is not continuously busy with whole class lecturing. The main concern is to promote student-student interaction intending to maintain positive relationships and fostering peer learning (Rosenfield et al.,1985). Students take the responsibility of all group members and develop problem-solving skills while collaborating during tasks. To update the topic with education and language teaching, cluster seating has similarities with cooperative learning (Demirel, 2009) which is one of the strategies in educational sciences (Demirel, 2004) also counted among new trends in ELT (Demirel, 2004). Yet, there may be students who get easily distracted by peers (Simmons et al., 2015).

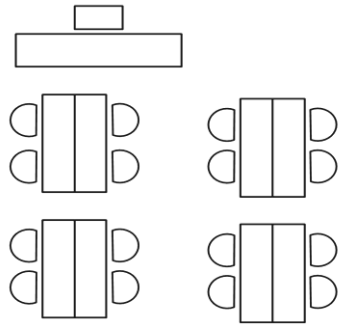


Figure 3.2 Cluster seating

3.2.3. Horseshoe Arrangement

The horseshoe-shaped arrangement, also known as the U-shaped arrangement, is beneficial for teacher-student and student-student interaction (Fernandes et al., 2011). As shown in Figure 3.3, the teacher is in the centre of the open end and all students are facing each other. This seating arrangement optimises overall communication and eye contact in the classroom and is therefore best for interactive behaviour (Wannarka & Ruhl, 2008). Nevertheless, the most engaged students tend to be those seated directly across from the teacher. Because of the dead space in the middle of the arrangement, it is not suitable for larger classrooms, but a double horseshoe arrangement with one inner and one outer horseshoe may be a solution to this problem (McCroskey et al., 1978). One of the major shortcomings is that conducting group work and cooperative learning seems rather difficult with this type of seating arrangement.

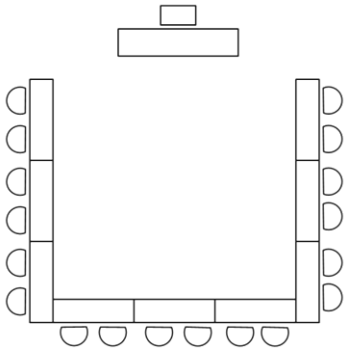


Figure 3.3 Horseshoe arrangement

3.2.4. Herringbone Arrangement

In this arrangement, the seats are slanted to one side, and overall the arrangement looks similar to the skeleton of a fish (see Figure 3.4). The herringbone arrangement, also known as

the stadium arrangement, has two advantages: First, it lends itself to whole-class activities, such as classroom discussions (Denton, 1992), and second, students sitting in a row can work in groups of two, three, or four, depending on the number of students in a row. This has a positive effect on student-teacher and student-student interaction (Ridling, 1994). Students, especially those in the front rows, can easily see the teacher and the technology in the classroom. However, students in the back rows may lack motivation and engagement due to the distance from the teacher. It is similar to the traditional seating arrangement, except the direction of the rows is changed. The focus is on the teacher and collaboration can only happen between students in the same row. This type of arrangement is not suitable for group work, as face-to-face interaction between rows is limited. As a consequence, row, cluster, horseshoe and herringbone are the most common seating arrangements. In the light of aforementioned seating arrangements it seems important how seating is utilized in an effective way in ELT classrooms. Accordingly, the next part is related to seating patterns in language classrooms.

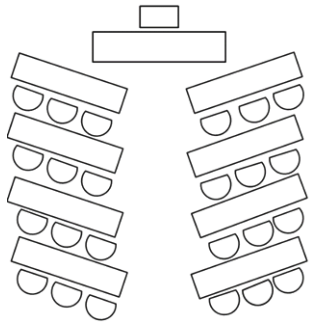


Figure 3.4 Herringbone arrangement

3.3. Seating Arrangement in Language Classrooms

Seating arrangements in the language classroom and their effects are explained with regard to row arrangement, circles, clusters, horseshoes, and action zones. Harmer (2007, pp. 41-44) states that despite its restrictive appearance, an orderly row arrangement can have some advantages for language classrooms. For example, row and column arrangement is preferable for grammar instruction, including the teaching of language functions, vocabulary acquisition, and pronunciation. In such lessons, the teacher gives explanations to the whole class and eye contact plays an important role. Arranging in orderly rows is also suitable for lessons in which the teacher uses instructional technologies such as the blackboard (interactive or not) or overhead transparencies. Orderly rows arrangement is most appropriate or even a necessity when classrooms are crowded. However, the teacher must remember not to neglect interaction

with students in the back rows. As the teacher moves between rows, he/she has the opportunity to observe students' actions and reactions.

Falout (2014) explains the rationale for row seating, noting that teachers use traditional row arrangement due to sociocultural constraints, which in turn negatively affects motivation. According to Falout, these "*antisocial environments*" lack understanding and trust while providing quiet. Action zones are defined as areas where the most interaction and participation occurs. Students in the action zone can better see and hear the teacher and vice versa. In the traditional row arrangement, this zone is in the shape of a triangle, as shown in Figure 3.5.

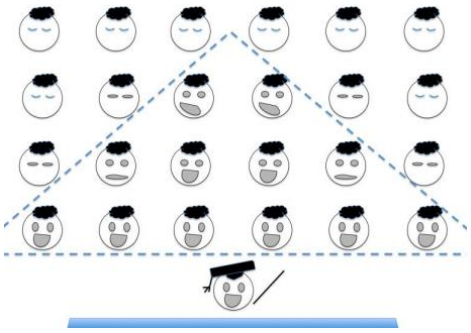


Figure 3.5 Action zone in rows and columns arrangement (Falout, 2014)

Falout also claims that the action zone affects students' academic performance, as teachers tend to neglect students outside the zone, leading to disinterest and demotivation. Because of its benefits in terms of strengthening belonging and expanding the action zone (see Figure 3.6), a circular seating arrangement is suggested for language classrooms, especially when the number of students is between 20 and 25.

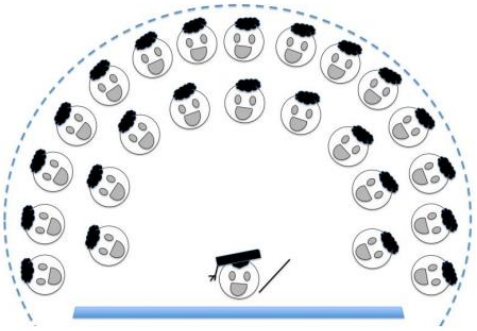


Figure 3.6 Action zone in circular seating arrangement (Falout, 2014)

Apart from Harmer (2007) and Falout (2014), also Nunan (1989, p. 8) criticises the traditional design of classrooms by suggesting that "*it is worth exploring the feasibility of dividing leaners into smaller sub-groups for parts of the learning day rather than sticking to the 'oneroom, one teacher, twenty student' syndrome"*. Distance from the teacher affects students at different levels, and teachers should be aware of those who are negatively affected. Students in the front rows are typically more active and engaged, while students in the back rows tend to be more passive (Shernoff et al., 2017). However, it should be noted that not only seating, but also motivation is a predictor of student engagement (Benedict & Hoag, 2004).

As an alternative to row seating, Harmer (2007) affirms that circles increase the sense of equality compared to arrangements where the teacher sits in front. Sitting in a circle or horseshoe reduces the distance between teacher and students. Also, students can see each other and do not have to turn around to see their classmates. This makes the classroom a "friendly" place where it is easy to share feelings and knowledge. The "separate table arrangement", also known as group or cluster seating, is beneficial for collaborative work on assignments. Harmer explains that it supports the teacher's role as facilitator by providing help to small groups of students while others are busy with their own studies. Group seating, however, is inconvenient when lecturing to the whole class.

According to Harmer, "solo work arrangement" (students sitting alone) allows students to be individual without relying on others. This type of seating arrangement is rarely found in the research context (Turkey). It gives students the opportunity to respond to their own needs and pace of learning. Harmer concludes that it is advisable for teachers to be flexible in planning seating arrangements and to make decisions after reflecting on experiences. In order to plan and measure the effectiveness of any type of seating arrangement, the teacher must act as a researcher. The following section highlights the effects of different seating arrangements in different contexts; however, the number of studies focusing on ELT is rather limited.

3.4. Literature Review

In the early 1900s, John Dewey criticised traditional education by proposing the concept of "*learning by doing*" and considering the student as an active agent of the learning process. Dewey stated that "*schoolrooms, with their set desks, [are] arranged for handling as large numbers of children as possible; for dealing with children 'en masse', as an aggregate of units; involving, again, that they be treated passively*" (Dewey, 1900, p. 47). Consistent with these critiques, the educational environment has become a major issue in recent decades.

Seating arrangements have been considered a key element in student learning, and several studies examined classroom design and seating patterns from different perspectives. Most of the studies reviewed addressed seating arrangements in different contexts, while three studies from abroad and three studies from Turkey focused on learning EFL. Studies investigating seating arrangements can be analysed from several points of view. First, the studies can be analysed in terms of language instruction and non-language instruction. Second, they can be divided into studies conducted in Turkey and studies conducted outside Turkey. Third, they can be analysed according to the method used. Fourth, they can be examined according to the objectives and purpose. Last but not least, the contexts, data collection instruments, types of schools, and styles of seating can be used as points of analysis. In the following section, a comprehensive and narrative analysis of the studies is offered.

3.4.1. Seating arrangements in language instruction

The literature review includes six studies conducted in EFL context; three of them are from abroad (Nurfaidah et al., 2021; Philpott, 1993; Yang et al., 2021) and three studies are from Turkey (Kuru &Tosun, 2022; Salma, 2020; Yıldız 2020).

Philpott (1993), for example, conducted an AR study implementing action plans related to seating plans in EFL classes in a Spanish context. Foreign language instruction took place in one classroom so that students came to the U-shaped classroom according to the weekly schedule and sat according to their preferences. The teacher-researcher changed the seating arrangement in two ways. First, it was the teacher who moved to another place during the lessons. In the second, the teacher distributed the seats so that the students could not sit in their usual seats. In both cases, it was observed that the students had no difficulty in getting used to the new seating arrangement and did not react anxiously to the new situation. The teacher did not inform the students about the study at the beginning in order to collect data in a natural setting. As student engagement increased during the implementation of the study, it was concluded that an intervention was needed if a positive change in student engagement in the classroom was desired.

Besides, Yang et al. (2021) investigated students' preferences for seating arrangements during cooperative learning activities in EFL blended learning classrooms. Ninety-four students from a university in China participated in the study. The study focused on semicircle and row and column arrangements, and data were obtained through questionnaires and observations of videotaped cooperative activities. The results indicate that students preferred semicircular arrangements in the EFL blended learning courses.

Additionally, Nurfaidah et al. (2021) conducted a case study with an EFL lecturer in Indonesia. The results confirmed that the lecturer used four types of seating arrangements for different purposes. As in the study conducted by Simmons et al. (2015), the traditional row arrangement was found to be useful for individual work, while the U-shaped arrangement and group arrangement promoted student-teacher interaction and collaborative learning. Nurfadaih et al. concluded that teachers should choose seating arrangements in accordance with learning objectives.

In the context of EFL in Turkey, Salma (2020) conducted a case study with 16 students, 4 assistant principals, and 7 caretakers in four secondary schools. Observations and interviews were used to explore participants' perceptions of different seating arrangements, particularly in English classes. Although described as disadvantageous to group work and engagement in English classes, it was found that the traditional row arrangement was the most commonly used seating arrangement. The distance between the back rows and the teacher or blackboard was cited as another disadvantage of this seating arrangement. Cluster and U-shaped arrangement were found to be more appropriate for applying the constructivist approach to foreign language learning because they improve classroom interaction and increase engagement.

In addition, Yıldız (2020) conducted a qualitative case study to investigate the perceptions of EFL teachers regarding the learning environment in ELT. The study found that four of the nine high schools included in the study had foreign language classes. Among other problems faced by these classrooms, teachers stated that the fixed seating arrangement limited the use of different teaching methods. It was suggested that the classroom be flexible and that the number of students be adjusted to fit this idea.

Similarly, Kuru and Tosun (2022) studied teachers' views on an effective EFL learning environment. The study was conducted in different provinces of Turkey and included 13 multigrade teachers. The results indicated that the teachers prioritized bringing students of the same age together when arranging seats, i.e., a peer seating arrangement. The U-shaped seating arrangement was the second most common arrangement used by teachers.

3.4.1.1. Discussion

Although these studies referred to EFL, they had different aims, used different seating arrangements, and reached different conclusions (see above). In fact, the studies sought to measure the effects of seating arrangements in different contexts. In Philpott's (1993) study,

the U-shape appeared to be effective, but Yang et al. (2021) found that students preferred a semicircular arrangement to rows and columns. An important point in Salma's (2020) study is that traditional row seating was described as the most commonly used seating arrangement, although it has been criticised in the literature (Nunan, 1989; Falout, 2014). Cluster and U-shaped seating were considered more appropriate for constructive classroom interaction in Salma's (2020) and Nurfaidah et al.'s (2021) studies, while semicircular seating was effective in Yang et al.'s (2021) study. It appears that different results are obtained in different contexts. In the study conducted by Yıldız (2020) it was suggested that the number of students in classrooms should be adjusted to the idea of implementing different seating arrangements. Kuru and Tosun (2022) found that multigrade teachers' priority was grouping students at the same age when arranging the seats in ELT.

3.4.2. Seating arrangements in non-language instruction

Finally, the rest of the studies fall into this category; most (11) are from abroad and some (6) from Turkey. Moreover, it seems that although some of the studies focusing on seating arrangements were conducted in the same context, e.g., America or China, different results are recorded.

3.4.2.1. Seating arrangements in American Context

One of the contexts in which five of the cited studies of seating patterns were conducted is America. For example, McCroskey et al. (1978) explored students' preferences for the location of seats within various seating arrangements. The study included 972 university students enrolled in communication courses and followed a quantitative research design. The traditional row arrangement was preferred by about 50 percent of students in compulsory courses. In elective courses, however, most students preferred the horseshoe arrangement. Overall, the results showed that students with better grades preferred the traditional seating arrangement in both courses. Another finding of the study was that even with a manipulated seating arrangement, students chose seats based on their desire to participate.

In addition, Benedict and Hoag (2004) investigated whether seating or seating preferences affect academic performance in economics courses. The survey was conducted with 198 university students. The classrooms were arranged in a fan-shaped manner and students were seated according to their choice. The results of the survey showed that most students preferred to sit near friends, as we tried in an action plan. Benedict and Hoag emphasised that students who came earlier had an advantage in their choice of seating. On the other hand, students who

preferred the back seats sat in the back rows. Thus, sitting in the back rows might be related to a lack of motivation rather than a limited number of seats. The results also showed that sitting in the back rows of a classroom was an indicator of poor performance. Moving from the back to the front rows increased academic performance by 25 percent in the study. The question of whether an increase in final grades was related to the ability to hear and see better in the front rows remained open.

Similarly, Meeks et al. (2013) investigated whether seating position and type of seating had an impact on academic performance. The quantitative study was conducted with 1.138 business students who took a final course over a ten-year period in classrooms with tiried and non-tiried row seating at two universities. It was hypothesised that students in the front rows would perform better than students in the back rows, but the results did not confirm this hypothesis. Seating arrangement alone was not an indicator of high academic achievement. The results suggest that differences in academic performance are more related to gender, and that female students perform better than males. Meeks et al. note that this result favours teachers because they would otherwise have difficulty allocating the "best" seats.

Furthermore, Simmons et al. (2015) compared students' on-task/off-task behaviour during independent reading activities when they sat in row, cluster, and horseshoe arrangements, respectively. The study, which involved 21 second grade students, was conducted at an elementary school. Students were observed for three weeks during reading activities using anecdotal records, behaviour control sheets, and behaviour checklists. Each arrangement proved beneficial in different ways. The row seating arrangement was beneficial for on-task behaviour and individual work, while the group arrangement was beneficial for collaborative work and sharing of materials. The horseshoe seating arrangement proved useful for discussion and cooperative learning.

In addition, Kinahan (2017) examined the experiences and perceptions of five elementary school teachers regarding seating arrangements. The study used a qualitative research design with semi-structured interviews with the teachers. All participants stated that they viewed seating arrangements as an effective tool for creating a supportive and collaborative learning environment. Teachers stated that they prioritise student needs and preferences, as well as curriculum changes, when arranging seating in classrooms. In addition, expected outcomes, academic goals, and social considerations were cited as highly influential in classroom design. Teachers' decisions regarding seating arrangements were also influenced by personal childhood experiences and the opinions of colleagues. Teachers had experience with various

seating arrangements, of which the U-shape was the most preferred. The row and column arrangement, on the other hand, was the least preferred option.

3.4.2.2. Discussion

The reviewed studies from American context were undertaken at different schools with different seating arragements and different objectives. For example, two of the studies (Benedict & Hoag, 2004; Meeks et al. 2013) explored the relation between the seating arrangement and academic achievement. Most of the students sat near their friends as it was the focus of one action plan in the present study. In both studies the success of the students increased in an opposite way. In the former if students moved from back to front rows the success increased 25%, but in the latter the front row seaters did not outperform the students in the back rows. In the former the classroom was fan-shaped and the latter employed tiried and non-tiried seating style. Similarly, in McCroskey et al.'s (1978) study the students with higher grades from compulsory and elective courses preferred traditional row seating. In this case, it can be claimed that students can be successful in different seating styles. In order words, it seems that the students' success does not depend on a particular seating style. Besides, Kinahan's (2017) purpose was to measure teachers' perceptions of seating and the study revealed that the students preferred U-shaped seating. In addition, we learn from Simmons et al.'s (2015) study that the type of activitiy to be done in the classroom requires a certain type of seating pattern. In that study row seating is proper for on-task behaviour, cluster seating is appropriate for collaborative work and finally horseshoe is suitable for discussion. In short, the above stated studies were undertaken in the same context (America), but they do not show a general tendency of the students' preferences for seating styles.

3.4.2.3. Seating arrangements in Chinese Context

Another context in which seating arrangements have been studied was China, where the following non-language-based studies were conducted. For example, Xi et al. (2017) conducted a quantitative study examining the relationship between students' preferences for different classroom arrangements and their academic performance at a university in Beijing, China. Results from 177 randomly distributed questionnaires showed that more than 50 percent of students preferred small to medium-sized classrooms with a cluster seating arrangement that allowed greater proximity to the blackboard and a higher level of classroom interaction. In addition, most students felt that the seating arrangement affected academic performance. The results of the study showed that students who sat in the middle rows performed better than students who sat elsewhere in the classroom. In addition, Xi et al. found

that students with better grades who sat in the middle rows preferred to learn individually, while students in the back rows were more dependent on classmates.

In an ethnographic study in Chinese context, Zhang (2019) observed homeroom classes at two high schools and one secondary school. Teachers' and students' views related to seating arrangements were obtained through interviews. Zhang states that education in China is characterized by a strict exam-oriented style. Accordingly, academic achievement is highly appreciated by society and classes mainly rely on memorization and drilling under teacher control. Data obtained through observations and interviews revealed that successful students were awarded with "good" seats to maintain academic success and positive attitudes. Rows and columns arrangement was employed in all classrooms and "good" seats were described as the front rows in middle columns. Seats in the left and right columns and in the back rows were distributed to students with low academic performance in order to increase their enthusiasm for learning. In other words, besides considering students' physical features, seats were mainly distributed according to academic performance. Consequently, seats were not fixed and could change even during the day. Some teachers' previous attempts to challenge the traditional row arrangement were reported as a failure due to objections by colleagues.

3.4.2.4. Discussion

In addition to the two studies mentioned above, another study on ELT from China (Yang et al., 2021) was analysed under the title 3.4.1. Regarding the Chinese context, it should be noted that only one study (Xi et al., 2017) aimed to investigate the relationship between academic success and seating. The study found that more than 50 percent of students preferred group seating. A key finding of the study is that students sitting in the middle rows performed better than students sitting anywhere in the classroom. Another study (Zhang, 2019) provides evidence of the success and importance of the front and middle rows by explaining that academic achievement is highly valued by society and successful students are rewarded with "good seats," which refers to the front rows in the middle columns. It seems that this is the formal education policy in China, as the study was conducted in a secondary school and places in elementary school may be allocated according to the same criteria. Nevertheless, in Yang et al.'s (2021) study students preferred semicircular arrangement in EFL courses at a university. This may mean that there is no formal intervention in students' choices of seating in higher education.

3.4.2.5. Seating arrangements in Turkish context

This section also falls under the category of non-language-based classroom design studies. However, three studies (Kuru &Tosun, 2022; Salma, 2020; Yıldız 2020) have already been examined among the language-based studies on seating arrangements. Here, the researcher was concerned with providing an overall view of the Turkish context. Several studies were devoted to examining the physical aspects of seating arrangements and the effects of classroom design.

For example, Karaman (2009) studied seating arrangements in large halls by evaluating eight different rooms in terms of visual and acoustical comfort conditions and found that fan-shaped seating was beneficial for both conditions according to the parameters identified.

Besides, Çınar (2010) conducted a survey among 566 students enrolled in the Faculty of education at a university. The study focused on students' preferences regarding seating in traditional classrooms. The study concluded that students who prefer to sit in the front rows of the traditional row arrangement participate in class with greater enthusiasm. Çınar also found that female students paid particular attention to their seat location.

In addition, Yıldırım et al. (2011) investigated students' perceptions of two differently designed computer classrooms. The study included 60 male students from the Department of Furniture and Decoration at a university. Participants preferred the classroom with a smarter interior design, in which desks were grouped, to the classroom in which desks were lined up.

Moreover, Hilal (2014) investigated seating arrangements regarding attention, concentration, participation and interaction by comparing straight row arrangement and U-shaped arrangement at the Department of Interior Architecture and Environmental Design at a university. According to data collected from 26 university students through observations, videos, photographs and a questionnaire it was concluded that straight row lecture rooms were more effective for students' attention and concentration. On the other hand, results showed that U-shaped lecture rooms were more beneficial for participation, classroom interaction and groupwork.

Futhermore, Kılıç (2019) focused on ergonomic arrangements regarding school furniture and working equipment in workshops at a vocational high school. Anthropometric data were collected from 53 male participants studying at the department of installation technology and air conditioning. It was inferred that standard values for furniture and equipment were not suitable for all students which called for considering differences between countries.

Therefore, it was suggested to use flexible equipment which could be adjusted to students' physical characteristics in order to prevent health problems and increase productivity.

A more recent study was conducted by Utku et al. (2021) at a university to investigate ergonomic aspects of classroom design based on anthropometric measurements. The results of the questionnaire in the study showed that students did not prefer chairs with tablet arms. The study related to classroom furnishings, which is beyond the scope of this study.

3.4.2.6. Discussion

It was seen in Salma's (2020) study that cluster and U-shaped seating arragements were most useful in the ELT classroom in that they improved classroom interaction and participation. Karaman (2009) found that fan-shaped seating was beneficial. The study by Utku et al. (2021) found that students did not support the use of chairs with tablet arms. Hilal's (2014) study results show similarities to the results of the study by Simmons et al. (2015) mentioned above. That is, different activities in different seating arrangements were useful as follows: Straight rows of seats in lecture halls were effective for students' attention and concentration. U-shaped seating was more beneficial for participation, interaction, and group work. Since Kılıç (2019) analysed students' ergonomic arrangements with school furniture and equipment, no specific seating style is mentioned in the study. Yıldırım et al. (2011) found that the participants preferred the classroom with a smarter interior design in which the desks were grouped. In genearal, the studies focused on ergonomic aspects in classroom design.

3.4.2.7. Other Contexts

Other studies have come from Canada, the Netherlands, Italy and Rwanda. For example, Douglas and Gifford (2001) examined the perceptions of university professors and students regarding classroom design in psychology courses. A total of 73 participants were given a questionnaire to rate the "friendliness" of 35 classrooms at two Canadian universities that were depicted in photographs. The items related to physical characteristics such as room size, brightness, seating comfort, and seating arrangement. The results showed that professors' and students' preferences and thoughts about classroom design were very similar. In general, faculty and students preferred seating arrangements that facilitate interaction and social learning, i.e., U-shaped or cluster arrangements.

In addition, Gremmen et al. (2016) conducted a study to investigate teachers'considerations when organizing seating arrangements. 50 teachers in elementary schools in the Netherlands participated in the study, and data were collected through in-depth interviews and

questionnaires. The results of the study showed that the preferred arrangement in the classroom was group seating, followed by row seating. Teachers who were concerned with discipline and imparting knowledge in a quiet atmosphere preferred rows, while those who emphasized collaboration among students preferred the small group arrangement in their classes. The most commonly cited factors considered when arranging students were academic considerations, physical characteristics, disruptive behavior, and personal characteristics of the students. Results also showed differences in teachers' views by gender, as female teachers prioritized social considerations.

Moreover, Tobia et al. (2020) investigated the relationship between different seating arrangements and students' cognitive processes, including reasoning, creativity, and social cognition. The quasi-experimental study was conducted with 77 students between 8 and 11 years of age at an elementary school in Italy. The seating arrangements studied were groups and individual tables, and data were collected using questionnaires, a test, and a task. The study found that individual tables were more beneficial in terms of reasoning, creativity, and individual task performance. Therefore, it was hypothesised that social distancing during COVID -19 could have a positive effect on academic performance. On the other hand, it was concluded that teachers should consider the scope of the tasks and the characteristics of the students when arranging the seating.

Lastly, Tafahomi (2021) studied seating arrangements at a university in Rwanda, focusing on seating arrangements in architecture studios. As with a study conducted in a similar setting in Turkey (Hilal, 2014), the study found that students preferred the U-shaped arrangement in classrooms and studios for two reasons. First, this arrangement was useful for accomplishing tasks in teams in this department. The second reason was that the U-shaped arrangement promoted social interactions and cooperative learning. Interestingly, students did not prefer the front rows because in the U-shaped arrangement, the back seats have a direct view of the teacher.

3.4.2.8. Discussion

First of all, three of the studies were conducted in different places and with different objectives, but three of these studies have in common that they are countries in the west. Therefore, it is possible that they share some similarities. While students in Canada (2001) prefer the U-shaped arrangement and group seating, teachers in the Netherlands (2016) prefer row seating because they are concerned about discipline when imparting knowledge to students. In Italy (2020), on the other hand, the study found that students prefer single desks

for logical thinking, creativity, and individual work. The single desk refers to “solo work," as Harmer (2007) states in Section 3.3. The study conducted in Rwanda (2021) indicated that the students preferred the U-shaped arrangement. It is worth noting that, in contrast to other seating arrangements in which usually the front rows are favoured, the students preferred to sit in back rows in the U-shaped arrangement

3.5. Summary

*It was found that the most common seating arrangements were row, group, horseshoe, and U-shaped. It was also found that clusters were preferred in EFL classrooms. Since these studies were conducted in different contexts such as America, China, Turkey, etc., different results emerged depending on the school, method, context, and students. Three of the studies on EFL used different seating arrangements, namely U-shape, row seating, and semicircular arrangement.

*The non-language-based studies were conducted in American, Chinese, and other contexts. Studies that examined seating arrangements and academic performance (Benedict & Hoag, 2004; Simmons et al., 2015) concluded that students who sit in the front rows perform better academically. However, one study (Xi et al., 2017) found that students in the middle rows performed better.

*In the Chinese context, different results were obtained, but it is worth mentioning that “good seats”, referring to the front rows, are given to the students with high academic performance. It was assumed that this policy is applied in primary and secondary schools in China.

*Only one of the reviewed studies (Philpott, 1983) used action research as a method. Studies on seating arrangements in the context of ELT in Turkey are limited. The present study attempted to fill these gaps.

*The last three studies from the countries in the west - Italy, Canada and the Netherlands – provide different results on seating arrangements. Consequently, it is not possible to draw a general conclusion from the above studies.

*This raises the question of justifying an action plan that could be applied as a solution to traditional row seating. The next chapter will therefore explain the seating arrangement that can be implemented in ELT and the logic behind the selection of data collection instruments.

CHAPTER IV

RATIONALE OF ACTION PLANS

4.1. Introduction

The action plans of this study relate to the design of the classroom with different objectives. After investigating students' perceptions of the traditional row arrangement, which was conducted as fieldwork for this study, the seating arrangement was manipulated according to friendship groups and learning styles. Thus, this AR study aims to implement two action plans. One of these action plans was to investigate the effects of friendship groups on students' perceptions and academic achievement. Another action plan was implemented to determine the effects of learner groups on student perceptions and academic achievement. In this context, the concepts of friends, friendship groups, friendship in language learning, learning theories, and foreign language learning seem to be relevant. Therefore, the following section first examines friendship groups in terms of collaborative learning in the context of EFL. Second, learning theories in general are briefly discussed. Since learning styles and learning strategies are interrelated, strategy use in ELT is outlined by introducing Oxford's (1990) Strategies Inventory for Language Learning (SILL). Finally, learning styles are introduced in Reid's (1987) Percectual Learning Style Preference Questionnaire (PLSPQ) to examine their effects on student learning.

4.2. Friendship Groups

There is theoretical and empirical evidence for group learning. First, the theoretical views will be briefly discussed. For example, Vygotsky shed light on the learning process by explaining that learning takes place within certain zones. More specifically, in addition to a zone of learning without support from others, called the zone of actual development (ZAD), there is a zone of learning in which peer or adult support is crucial, called the zone of proximal development (ZPD). Therefore, students' interactions with peers and teachers are an essential part of the learning process (Vygotsky, 1978). Niemiec and Ryan (2009) explain that students' intrinsic motivation depends on the fulfilment of psychological needs such as competence, relatedness, and autonomy. The need for relatedness can be defined as the desire to establish and maintain close relationships with others in the social environment. It contributes to a sense of belonging and provides emotional support.

The literature review revealed that peer relationships, peer support, and academic achievement are interdependent (Juvonen et al., 2012; Ryan & Ladd, 2012). For example, in a

study conducted in a high school context, Liem (2016) found that not only academic, but also social aspects have an impact on students' functioning in school. In other words, the results of the study showed that positive peer relationships have a positive impact on academic performance. Similarly, Matric et al. (2019) investigated whether addressing the need for friendship affects engagement in EFL learning and reported that in addition to reducing EFL anxiety, peer support had a positive effect on engagement. Along the same lines, Senior and Howard (2014) examined the role of friendship groups in learning at a higher education institution in the UK and concluded that interaction within friendship groups, even if not related, had a beneficial impact on conceptual understanding.

4.3. Group work in EFL

Because of its recognised benefits in terms of academic achievement and motivation (Chiriac, 2014), engaging students in collaborative activities has been increasingly integrated into the educational context (Barron, 2000). The diversity of individual characteristics in groups allows for the learning of different knowledge provided by group members (Wang, 2020). Compared to individual work, group work leads to better learning outcomes (Cohen, 1994, Webb & Palinscar, 1996) and promotes problem-solving skills (Barron, 2000). Consistent with new views of learning and knowledge construction (van der Linden et al., 2000), collaborative learning provides complementary activities such as discussion and explanation, which in turn trigger further cognitive mechanisms, e.g., knowledge extraction and internalisation (Dillenbourg, 1999). In other words, knowledge is not presented by the teacher, and learners do not have to memorise the information. In collaborative learning, roles and responsibilities are divided among group members to accomplish tasks through the sharing of knowledge. Thus, learning is a social process that in turn contributes to the individual's learning (Senior & Howard, 2014).

Harmer (2007) states that group work has many benefits for EFL learners when potential disadvantages such as unequal participation in groups, disruptive behaviour, and learners' negative attitudes toward working in groups are overcome and explains these as follows:

- more opportunities to talk
- independence due to less teacher control
- learner autonomy
- less pressure than in whole class teaching
- special help provided by the teacher

Individual engagement is a prerequisite for a pleasant group atmosphere and positive outcomes (Wang, 2020). Positive group dynamics have a positive impact on group decision making and outcomes. Dörnyei and Muir (2019) stated that cohesive learning groups and positive group dynamics are fundamental to a motivating EFL classroom climate. Some of the suggested methods to promote group cohesion include an appropriate seating chart, extracurricular activities, working together toward common goals, awards and prizes, and the teacher's friendly and supportive behaviour. According to Nunan (1989, p. 8), "*[i]t is worth exploring the feasibility of dividing learners into smaller sub-groups for parts of the learning day rather than sticking to the 'one room, one teacher, twenty student' syndrome"*.

Based on the notion that knowledge is constructed in a social context (Oxford, 2011), the action plans of this AR were based on the use of cluster seating. Initially, the groups were formed according to the students' friendship circles, which were studied using the sociometric method developed by Moreno in the 1930s. The peer nomination method (Schofield & Whitley, 1983) and the peer rating method (Bukowski et al., 2012) are the two main methods of sociometric assessment (Jiang & Cillessen, 2004), with the former used to examine students' preferences for their deskmates by asking the following question: "Who would you like to sit next to in the classroom?"

4.4. Learning Theories

The process of 'learning' is one of the most difficult topics to define in academic disciplines (Ertmer & Newby, 2013). This is because learning theories change from time to time (Adams, 2006). For example, the second half of the 20th century saw a rapid change in theories and a paradigm shift from external stimuli to intrinsic factors (Ehrmann et al., 2003). As a result of improvements in science and technology, dozens of new disciplines emerged. In addition, each discipline sought to define the term 'learning' in terms of its goals. Due to time and space constraints, it is obviously not possible to address all of these disciplines. Therefore, we have limited the term 'learning' to, among others, three interrelated disciplines, namely linguistics, pedagogy, and ELT. Aitchson (1992, p. 9) describes the relationship between linguistics and language teaching by suggesting that the "*application of linguistics to language teaching"* is called applied linguistics. The question arises, "Can linguistics or linguistics theories help us identify the learning styles of students?"

Linguistics was initially only a separate discipline, but later many new subfields developed from it, such as phonology, morphology, syntax, semantics, paragmatics, sociolinguistics, applied linguistics, computational linguistics, historical linguistics, and so on. One can easily

get to the main 'linguistics theories' by surfing the Internet. We see that functionalism, structuralism, generativism, cognitivism, etc. are considered as the main linguistic thoughts, each of which aims to define learning from its point of view. In short, we understand that these definitions do not seem to serve the aim of the second action plan of the study. That is, these linguistic theories do not help us identify the learning styles of our students. Therefore, we can look at the second related area: ELT Theories.

The ELT theories refer to approaches, methods, techniques, and strategies. There are two widely held views on the first three terms. In the American view, the word approach refers to 'assumptions, views, and beliefs', the word 'method' refers to 'overall planning', and the word 'technique' refers to'"implementation'. In the British view, the word 'approach' refers to 'language and language teaching', the word 'method' refers to concepts such as curriculum, teachers' and students' views, curriculum design, etc., and the word 'technique' refers to procedures, time, and materials (Richards & Rodgers, 1995).

The previous paragraph contained theoretical information; the practical examples of the approaches, methods and techniques presented in ELT, namely communicative, natural, structural, lexical, etc., are approaches. Grammar-translation, direct method, total physical response, collaborative language learning, suggestopedia are methods and demonstration, debate, discussion, question and answer, lecture, role play, icebreaker are techniques. In short, each of the approaches, methods, and techniques considers only one dimension of learning, and given the 26 students and the differences among learners, it seemed that a single approach, method, or technique was not sufficient to address students' learning styles.

Another term frequently used on ELT is 'strategy'. Learning styles and learning strategies are different, but interrelated factors for learner differences (Balcı, 2017). Learning styles are "*general approaches […] in acquiring a new language or in learning any other subject*" (Oxford, 2003, p. 2), but learning strategy is "*specific actions, behaviours, steps or techniques[…]used by students to enhance their own learning*" (Scarcella & Oxford, 1992, p. 63). Although there are different definitions in the literature, the research on strategy seems to be tied to the understanding of Oxford's (1990) Strategies Inventory for Language Learning (SILL), which has been used in 82 academic studies until the presentation of a conference paper in Turkey (Tomakin, 2022). It has 50 statements and six sub-dimensions (Oxford, 2003).

1. Cognitive strategies: reasoning, summarizing, analyzing
2. Metacognitive strategies: self-evaluation, planning and organizing materials
3. Memory-related strategies: learning through acronyms, rhyming, images, keywords
4. Compensatory strategies: guessing meaning, using synonyms
5. Affective strategies: awareness of one's mood, feelings and anxiety level
6. Social strategies: asking for and providing help, exploring the culture

As seen above, the strategies seem to be rather abstract and are not suitable for identifying students' learning styles. This is due to the fact that the items on main and sub-skills are not evenly distributed on SILL; one statement is related to grammar, while 14 statements are related to vocabulary (Tomakin, 2022). Now we can turn to the last related area of learning, i.e., education.

Since the term 'education' covers a wide range of fields such as science, chemistry, physics, mathematics, sociology, philosophy, engineering, theology, music, etc., each of these disciplines aims to teach the subject of the field based on its principles. Thus, many different teaching theories emerged related to science teaching, chemistry teaching, physics teaching, and so on. Besides, we can see that behaviorism, cognitivism, constructivism, humanism, connectivism, social learning and experiential learning are the main learning theories. In addition, there are many websites that provide a presentation and classification of the learning theories presented so far (URL-2). In this website, about 30 learning theories are presented. In summary, each learning theory emphasizes only one side of learning. For example, behaviorism emphasizes stimulus, response, and conditioning, whereas cognitivism emphasizes creativity, and constructivism focuses on linking new information to previous experiences.

Thus, if we use a questionnaire or scale that measures only one dimension of learning, it may not be an appropriate measurement because the present study was conducted in a classroom of 26 students. In fact, it is possible that there are multiple learning styles in the classroom. It was assumed that the measurement instrument I would use would need to assess multiple learning styles and also take into account general learning styles. In educational science books, the proportion and relationship of the five senses that predominate in learning are explained as follows:

Five senses	Rate	
Visual	83 %	
Aural	11 %	
Smell	3.5 %	
Touch	1.5 %	
Taste	1 %	(Büyükkaragöz & Çivi, 1997, p.61)

The values given show that much of the learning is visual and auditory. Since Reid's (1987) questionnaire includes visual, auditory, and kinesthetic aspects and is partially consistent with the above results, the Perceptual Learning Style Preference Questionnaire (PLSPQ) constructed by Reid (1987) was used to determine the learning styles of the participating students.

In the "9th -12th Grades English Curriculum" proposed by the Turkish MEB, it is highlighted that teachers should "*[…] provide students with a wide range of learning repertoire addressing different learning styles and strategies"* (MEB, 2018, p.8). To accommodate different learning styles, it is recommended to use the suggested tasks and materials, e.g., cards, videos, games, role plays, songs, puzzles, etc. Choosing strategies that match learning styles has a positive effect on the language learning process (Ehrmann et al. 2003, Fleming & Baume, 2006; Oxford, 2003). Therefore, it can be concluded that knowledge of learners' learning styles is a necessity for the effective design of foreign language teaching (Aydoğan & Akbarov, 2014).

Last but not least, the teacher-researcher of the present study is aware that many other questionnaires, scales, learning models, theories are established and used in pedagogy and ELT. These include, for example, Dunn and Dunn's (1976) learning style model, Gardner's Theory of Multiple Intelligences (1983), and Fleming and Mills' (1992) model of visual, auditory, reading/writing, and kinesthetic abilities (VARK). Because of its relevance to the scope of the study, Reid's questionnaire is presented in detail in the next section.

4.5. Reid's (1987) Questionnaire

Critical and systematic reflection can help teachers in many ways to gain a deeper understanding of their own teaching and students' learning processes: When teachers reflect on their teaching experiences, they can determine which aspects of their teaching need revision. It has been suggested that teachers should examine learners' individual differences in beliefs, cognitive styles, and learning strategies. In other words, learners may show different preferences, e.g., work independently – work in groups, be organized - be spontaneous, be willing to take risks – avoid risks, prefer visual aids – prefer verbal information, etc. Identifying learners' individual differences can help teachers adjust their teaching style according to learners' preferences (Richards & Lockhart, 1996).

According to Reid (1987), EFL learners from diverse linguistic and cultural backgrounds are taught homogeneously in English language learning contexts. Moreover, teachers in these courses have inadequate knowledge about learning styles. In some cases, teachers even use methods that are appropriate for the learning needs of native speakers. Therefore, teachers should inquire about learning styles to facilitate learning. The proposed questionnaire, which was also administered to the participants of the current study, divides learning preferences into six categories. The categories in the PLSPQ are:

Visual learners: prioritize visual information; prefer reading and taking notes and learn best by seeing words in books and on the board.

Auditory learners: prefer oral explanation and from hearing words spoken; benefit from conversation with classmates and teachers.

Kinesthetic learners: prefer being physically active; enjoy field trips, role plays etc.

Tactile learners: like to manipulate materials; enjoy building, fixing, or making things.

Group learners: prefer group interaction and classwork; enjoy working with others.

Individual learners: like working on their own.

In the classroom, it is important to raise awareness of effective learning strategies and monitor them so that learners do not use ineffective strategies (Richards & Lockhart, 1996). Specifically, language teachers should guide students in using effective learning strategies that suit their learning styles to promote language learning.

4.6. Summary

It can be concluded that group learning is preferred, although we are aware that there may be some exceptions, such as individual learners, as is usually the case in the classroom of ELT. It was also noted that a single linguistics, ELT, or educational theory does not seem to be appropriate for identifying students' learning styles. Therefore, the PLSPQ constructed by Reid (1987) was used to identify the learner groups in the classroom. After observing the classroom and conducting interviews about the seating rows, the action plans were implemented after arranging the groups according to friendship groups and learning styles. Note that arranging students by friendship groups was the first action step and is referred to as friendship group seating (FGS) henceforth. Arranging seating by learning styles was action step two and will be referred to as learner group seating (LGS). The problems encountered so far can be summarised as follows:

*In the first chapter, it was noted that the term AR is widely used and Lewin is considered the originator of the AR studies, although several other names are mentioned.

*The second chapter noted that providing information about the nature and model of AR, action plans, and cycles of action is as important as providing guidance to someone who does not know where to go. The procedures of an AR study need to be explained step by step.

*In the third chapter, common seating arrangements, seating arrangements in ELT and relevant literature from Turkey and abroad were studied. However, the number of these studies was not sufficient to draw a general conclusion.

*This chapter showed that a single linguistics, ELT, or educational theory is not appropriate to classify students into learning groups. For this purpose, Reid's (1987) PLSPQ was used to determine learner groups.

The research design, participants, action plans, instructional context, data collection, and analysis have not yet been described in detail. Therefore, the following chapter will attempt to introduce these components as the method of the study.

CHAPTER V

METHOD

5.1. Introduction

This chapter will explain how the methods and procedures were used to investigate the research problem and answer the research questions. It will also present the research design, context, participants, and data collection instruments used in the current study. Furthermore, it describes the procedure, which consists of fieldwork and two action plans, and can also be defined as a timeline for the study. Finally, the techniques that were used throughout the study for data collection and analysis are explained.

5.2. Research Design

This AR adopted a mixed-methods research approach by using qualitative and quantitative research methods. The goal of using both quantitative and qualitative methods was to better understand the research problem and shed light on the research questions (Creswell, 2012). In other words, the qualitative data were triangulated with the quantitative data and vice versa. Triangulation, i.e., bringing together evidence from different sources such as interviews, observations, diaries, etc. (Hopkins, 1996), also ensures the validity of the research by reducing the weaknesses of one method through the strengths of another (Dörnyei, 2007). In this study, qualitative and quatitative data were gathered simultaneously. Therefore, the order in which qualitative and quantitative data were collected indicates that a convergent mixed-method design was used in this study (Creswell, 2012).

Although AR is usually associated with qualitative research, the research questions can be analysed in both qualitative and quantitative ways (Ivankova & Wingo, 2018). In this study, qualitative data were collected throughout, while the second research question related to academic achievement and was answered through the use of numerical data in the form of written exams. Indeed, AR can be conducted both qualitatively and quantitatively, and examples of both were cited in Tomakin (2009, p. 118). The data collected during the study will be used to develop evidence-based action plans and to improve through collaboration among stakeholders. In light of the primary goal of improving student learning and teacher-researcher professional performance (Creswell, 2012), the current study can be classified as a practical AR that draws on both qualitative and quantitative data.

5.3. Research Method

This AR uses the case study method. The method is crucial in that it must explain every part related to the research process. Nevertheless, some AR studies (Özdemir, 2009; Korucu, 2011) do not give further and clear information about the method used. Özdemir (2009, p. 24) states that it is a qualitative research design and "*the study utilized AR as a tool*". Considering Elliott's (1991) statement that AR combines teaching and research, the researcher could say something more about the study: for example, this part of the study is research and that part of the study is teaching. The latter (2011, p. 53) first states that it is a qualitative study and further reveals that "*this study is a case study*". From the title of the study and the literature review, it is clear that the study is an AR. At this point, the question arises as to which part of the study is AR?, which part is a case study ? and what are the cases? No further information is provided on these questions. Therefore, it was considered necessary in this study to explain the research method as clearly as possible.

The present study is an AR, which aims to measure different types of seating arrangements. Therefore, in chapter two, a critical review of the literature was conducted. Whitehead's (1989) model of AR with five stages was used. The study included action plans aimed at changing traditional row seating. Participants were involved in determining seating arrangements. That is, it did not impose a teacher-dominated classroom, but was based on collaboration and agreement, which are characteristics of AR. The goal was to teach the agreed-upon action plans with the agreement of the participants. In this sense, the sixth chapter reflects the teaching side (the impact of teaching) of the study. A specific AR model was used and data were collected and analysed accordingly. Therefore, chapter two, four and five reflect the research side of this AR.

In the study, the case study method was used in the implementation of teaching and research aspects. Therefore, the main theoretical views about the case study are reviewed to show the potential cases of the study. A case is a "*unit of analysis*" (Yin 1989, p. 31). "*A case is a phenomenon [...] occurring in a bounded context" and researchers' unit of analysis*" (Miles & Huberman, 1994, p. 25). From another point of view the case is seen as being an instance:

> *"A case is an instance [...], like a sample, a representative, of a class and that case study is the basis for generalisation and hence cumulation of data is embedded in time."* (Stenhouse 1978, p. 21).

Stake (1995, p. 1) poses a general statement to define cases in terms of education. In his view "*people and programs are cases in education*". Although Punch (1998) states that cases can

be a school, pupil, teacher, group, organisation, phenomenon, etc., Nisbet and Watt (1984) provide new examples of cases apart from the usual examples -pupil, teachers, school and define a case as a "*a new method of teaching or a new method of organisation*" (p.73). "*Case may emerge as a result of imagination* (Saint-Germain, 1995, p. 172). According to this view, "*a case is a [...] narrative description of events occurring in reality [...] and is a [...] created object [...]*".

So far it has been established that "case" can be an instance, a unit of analysis, a phoneme, persons-students, teachers, programmes, instructional contexts. All of this can be summarised in Adelman et al.'s (1984) view that researchers either take a bounded system (the case) and investigate questions within that preselected case, or they start with a question (a problem) and bound the case during the research process.

From the above stated theories and definitions, it can be concluded that school is the case for this study. Since I conducted the study in only one classroom and Stenhouse (1978) assumes one instance, this classroom can be considered a case. Moreover, each of the 26 students or all students can be considered a case in the sense of Punch (1998). Furthermore, teaching methods ranging from traditional row seating to friend and study groups are possible cases. Last but not least, the cases of the study depend on the reader's imagination and interpretation of this study, as Saint-Germain (1995) states. This is the case side of the study, which means the limitation of the study in terms of participants, context, etc.

5.4. Research Context

The context of the study was a high school in Ordu, a city in Turkey, and included 26 EFL learners who were in 9th grade at the beginning of the study. In the final action step, they were 10th grade students. At the beginning of the study, permission was granted by local authorities to conduct the study (see Appendix F). Since the 2013-2014 school year, students in Turkey have received formal English instruction starting in the second grade of elementary school, which corresponds to ages 7 to 8. According to the official curriculum, students receive 5 hours of English instruction per week in the 9th grade, followed by 2 hours in the higher grades.

Following a curriculum reform in 2020, foreign language instruction will assess students' performance in the basic skills of reading, writing, listening, and speaking. Accordingly, the specified textbooks contain various topics based on the teaching of the four basic skills. In addition, the textbooks also include activities to teach the sub-skills, namely vocabulary and

pronunciation. In the "9th -12th Grades English Curriculum" proposed by the MEB, it is emphasized that foreign language teachers should use a variety of tasks and materials such as videos, games, role plays, songs, and puzzles to address different learning styles and strategies (MEB, 2018). The final phase of the current study also focused on this approach to teaching.

Finally, it should be noted that this study was conducted after the Covid 19 pandemic and the switch from online to face-to-face instruction. Thus, the data collection procedure was not affected by this period.

After outlining the research context, the research questions, as stated in Section 1.4.1, can be reformulated as follows: The aim of the study was to explore:

- To what extent the study has an effect on students' perceptions and academic achievement
- To what extent the different seating arrangements affect students' perceptions and academic achievement.

5.5. The Participants

The participants in the present study were 26 female 9th graders who were identified through convenient sampling (Dörnyei, 2007). The average age of the female students was 15 years. As mentioned earlier, the 9th grade students receive 5 hours of EFL instruction per week, which continues in the higher grades with 2 hours of EFL instruction. It should be noted that the students were in tenth grade during the last action step of this AR. At the beginning of the study, students' English proficiency was determined through an achievement test, which was also part of the official school exam.

The students in this class seemed to be divided into three groups in terms of engagement: one group of students sat in the front rows and actively participated in class. Another group of students sat in the back rows and emphasized social interactions with their classmates. However, the students who sat far from the teacher against the wall appeared to be isolated from the overall classroom interaction. Consequently, it was hypothesized that conducting AR and changing the traditional seating arrangement in groups could be a way to promote classroom interaction and task-related behavior.

Since all students participated voluntarily in the study, it was not necessary to exclude students. Students participated on a voluntary basis and were informed of their right to drop out at any time. After being assured of confidentiality and anonymity, students confirmed their willingness to participate in the study through consent forms (see Appendix G).

5.6. Study Materials

The pre-determined textbooks titled “Teenwise 9” and “Count me in 10” were the main teaching materials and were used in different ways in the different phases of this study. In the traditional seating arrangement, all activities were prepared simultaneously with the whole class. Whenever possible, pair work was done among deskmates. In the first action step, the tasks were worked on together by groups of students sitting in clusters with friends. In the second action step, the tasks were usually divided into several parts and each learner group was responsible for a different section (see Figure 5.1, the screenshot of a page from the textbook). For example, in this lesson, the group learners had the task of completing the dialogue and the individual learners had to solve the true/false task. The kinesthetic learners role-played the dialogue, and the tactile learners had to prepare vocabulary flashcards (e.g., celebrate, call, graduation, babysit, throw a party). The teacher provided guidance and additional materials when needed (e.g., songs, games, worksheets).

Figure 5.1 The screenshot of a page from the textbook

5.7. Data Collection Tools

The research question, which examines the effects of AR on students’ perceptions of various seating arrangements and their academic performance in the context of EFL, is divided into a qualitative and a quantitative sub-question. In order to be able to change problems, ideas, and actions, which is the final phase of each cycle in Whitehead’s method of action reflection, the results of each action plan were assessed through the use of different types of data collection instruments (see Table 5.1). Questionnaires and semi-structured interviews were used to answer the first sub-question, which focused on how students perceive the different seating arrangements in English courses. The second sub-question examined students’ academic

performance through achievement tests administered in each action step of this AR. Observations and diary entries were used as additional data sources throughout the study.

Table 5.1 Action plans and data collection tools

Seating arrangement action plan	Data collection tools	Time	Topic
Traditional row arrangement (Fieldwork)	• Teacher-researcher developed questionnaire • Interview • Observation • Diary • Achievement Test	1st to 5th week	• Asking for / giving suggestions • Doing shopping • Making requests • Future plans • Phone calls
Cluster seating according to friend groups (Action Plan 1) FGS	• Peer nomination method • Teacher-researcher developed questionnaire • Interview • Observation • Diary • Achievement Test	6th t**o** 10th week	• Predictions about the fututure • Asking for / giving opinion • Conversations
Cluster seating according to learning styles (Action Plan 2) LGS	• Perceptual Learning Style Preference Questionnaire • Teacher-researcher developed questionnaire • Interview • Observation • Diary • Achievement Test	11th to 15th week	• Exchanging personal information • Taking part in a conversation in daily life situations

An important note about action plans: in applying each action plan, the researcher has collected, analysed, and reflected on data. In this sense, each action plan can be considered a cycle of action at the micro level, but at the macro level, two of the action plans formed a cycle.

5.7.1. Questionnaire on Traditional Row Arrangement

The first stage, as indicated in 5.8, is a preliminary stage of AR and a fieldwork. At the beginning of this AR, participants completed a questionnaire with a mixture of 11 closed and open-ended questions about the traditional row arrangement (see Appendix A). The closed-ended questions included yes-no options to avoid confusion and save time (Tomal, 2010). Demographic information and student perceptions of the traditional row arrangement were collected and analyzed to address the first subquestion. Students' previous experiences and preferences for different seating arrangements were explored. Open-ended questions were

also used to inquire about students' thoughts and feelings about participation and academic performance in foreign language learning with row and column seating.

5.7.2. Sociometric Nominations

The division of students into groups of friends was the first action plan. For this purpose, the peer nomination method, developed by Moreno in the 1930s, was used to evaluate peer relationships and obtain information on personal characteristics. It allows data to be collected in less time than through observations (Cillessen & Marks, 2017), and the assessment can include positive nominations, which provide information about popular students, or negative nominations, which show disliked students (Del Vecchio, 2011; Schofield & Whitley, 1983). Sociometric methods can be used for a variety of purposes, including identifying at-risk students, creating a positive classroom or school climate, and arranging classroom seating to improve teaching and learning (Cillessen & Marks, 2017). In the current study, students were able to write down the names of three classmates they liked the most (Chen et al., 2008). This information was used to group students by friend groups in the action step.

5.7.3. Questionnnaire on Cluster Seating (Friend Groups)

To plan the next action step of this AR, another questionnaire with 9 questions was conducted (see Appendix B). In addition to questions related to participation and academic achievement, students were asked whether FGS should be used throughout the school day or only in English classes. The last two open-ended questions allowed students to write down their positive and negative views about group seating by friend group. As a result of the sociometric analysis of student choices, seven friend group clusters were formed, some of which are shown in Picture 5.1.

Picture 5.1 Friend group clusters

5.7.4. The PLSPQ

The second action plan involved grouping seats according to student learning styles. To determine students' learning styles, the PLSPQ constructed by Reid (1987) was used. The questionnaire consists of six categories. These are visual, auditory, kinesthetic, tactile, group, and individual learning styles. After obtaining permission to use it (see Appendix I), the Turkish version of the questionnaire translated by Tomakin (2012) was used in the study (see Appendix J). The questionnaire consists of 30 items with responses based on a 5-point Likert scale. A score between 36 and 50 indicates the main learning style preference, a score between 25 and 37 indicates a lower learning style, and learning styles with a score of 24 and less are not significant. More detailed information on the results of the questionnaire can be found in section 6.10.1. Finally, clusters were formed based on the data obtained through the PLSPQ and the following learning groups were formed. Most students (N=11) were kinesthetic learners, followed by students who preferred to learn individually (N=7), students who preferred to learn in groups (N=4), and tactile learners (N=3). In the present study, it was hypothesized that students would benefit from homogeneous learning style groups in terms of foreign language learning because they would have common learning approaches.

5.7.5. Questionnaire on Cluster Seating (Learning Styles)

The final questionnaire developed by the teacher-researcher, which consisted of 10 closed-ended and 2 open-ended questions, explored students' perceptions of LGS. The questions explored students' awareness of their learning styles (see Appendix C). In addition, it examined how students perceived their academic performance and participation in foreign language classes when seated in groups determined by learning styles. Friend group clusters and learning style clusters were compared.

5.7.6. Semi-structured interviews

Data collected during the study were triangulated by conducting semistructured interviews with a subsample of 10 participants after the action plans were implemented. Students with varying levels of achievement, specifically higher and lower performing students, were asked to respond individually to teacher-developed questions. Assuming that students could better express their thoughts in their native language, the interviews were conducted in Turkish. The interviews allowed for reflection on and within the action and provided a deep understanding of the students' perspectives on the action plans. The following questions developed by the teacher and the advisor guided the interviews:

1. What do you think about this seating arrangement?

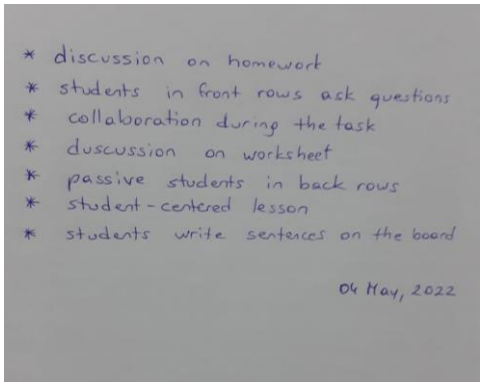
2. Are you pleased with your seat location?

3. Does this seating arrangement affect your involvement in lessons? If yes, describe in what ways, please.

4. Does this seating arrangement affect academic achievement? If yes, describe in what ways, please.

5.7.7. Classroom observation

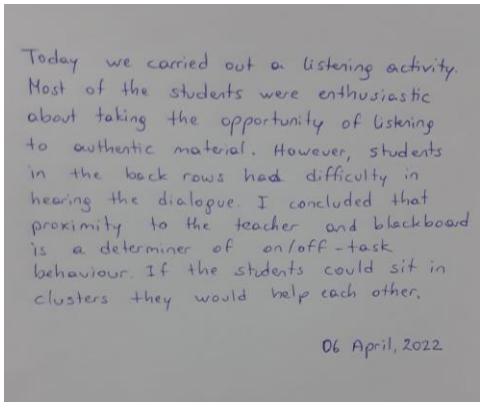
While interviews rely on verbal information, observations allow us to see the actions and behaviours directly. Therefore, they can provide more valid and authentic data that cannot be obtained through other methods. The feedback obtained through these observations can enhance the learning and teaching process (Sheal, 1989). Hopkins (1996) distinguishes four types of observation: open, focused, structured, and systematic. Because the focus of the observations was not on only one key point in the lesson, focused observation did not meet the teacher-researcher's goal. Structured observation is appropriate for a small number of students, but the observations in this study were for the entire class. Systematic observation requires the observer to use specific coding sheets that must be completed at the time of the observed behaviour. However, teachers may not have the time to do this during the lesson. In the present study, field notes were taken during and after the observations, which can be described as open observations. As can be seen in Picture 5.2, showing observation notes of the teacher-researcher, the instructor can observe patterns such as classroom interaction, engagement, and on/off task behaviour (Chesterfield, 1997).



Picture 5.2 Observation notes

5.7.8. Diary

According to Nunan (1992, p.18) "*diaries, logs, and journals are important introspective tools in language research*". Diary entries are unstructured and provide subjective insights and evaluations (House, 2018). Diaries, as a "*valuable tool for developing critical reflection"* (Richards, 1991) not only provide information about the writer, but also about others who interact with the writer. Therefore, the diarist reflects both on his or her own and others' experiences (Lune & Berg, 2009). In short, keeping a diary is a way of reflecting in and on action. Picture 5.3 shows a diary entry written by the teacher-researcher during the fieldwork.



Picture 5.3. Diary entry

5.7.9. Achievement tests (Formal Exams)

To answer the second sub-question, whether different seating arrangements affect student academic performance, quantitative data were collected through achievement tests, i.e., school exams, in each stage (fieldwork, action step 1 and action step 2), that were part of the assessment in formal EFL instruction (see Appendix K). The MEB states that assessment in foreign language classes must evaluate student performance in basic skills. For the reading portion, teachers select reading texts that usually include true/false or matching questions. The writing section includes intensive writing tasks that require students to write paragraphs in a given context (Çetin Argün, 2020). In the listening comprehension skills assessment, students perform intensive listening tasks in which they have to focus on details. For the listening comprehension part, teachers use the smartboards installed in the classrooms. The reading, writing and listening part is done in written form, while the speaking part is done orally and separately. In this part, the language teachers evaluate syntax, semantics and phonology (Çetin Argün, 2020).

The purpose of the EFL achievement tests was to assess the level of students' written and oral English proficiency. Therefore, the test included 5 sections: (I) reading comprehension, (II)

grammar and vocabulary, (III) writing, (IV) listening, and (V) speaking. The preparation of the test had to take into account that the test had to be consistent with the objectives of the curriculum (Ozer et al., 2014). The assessment may include objective and subjective test items (Ory, 1983). To increase the objectivity of the achievement tests, the questions usually included items with correct or incorrect answers, such as true-false, matching, and completion items. Students' proficiency was considered when deciding the difficulty level of the text in the reading comprehension section (Anggia & Habók, 2023). The smartboard was used for the listening comprehension part of the test, and students completed intensive listening comprehension tasks on the topics in the textbook. The speaking skills of the students were evaluated by a rubric including five criteria for assessment which are: Comprehension, vocabulary, pronounciation, accuracy and fluency. Tests were graded, and scores were used for both formal assessment and quantitative data analysis in the study (see Appendix L). Feedback sessions were conducted after each performance test to improve learning.

5.8. Procedure

After approval from the ethics committee, the local school board, as well as consent from the students, the study could begin. This study lasted 15 weeks and began in the 2021-2022 school year. Before the study began, permission to conduct the study was obtained from the school principal. Then, the students were informed about the purpose of the study. The steps in this AR were as follows:

5.8.1. Fieldwork

The first phase can be considered both the preliminary phase and the fieldwork of the study. The first stage lasted 5 weeks from the first week of April to the second week of May 2022 and began with an examination of the participants' demographic data. In addition, the teacher-researcher developed a questionnaire consisting of closed and open-ended questions to investigate students' perceptions of the traditional row arrangement. Reflection on the events was conducted through teacher observations and diary entries. The first formal English exam in April, which was part of the assessment of formal foreign language instruction, provided information about the students' English proficiency at the beginning of the study. In the final phase of this stage, semi-structured interviews were conducted with a subsample of 10 participants. The evaluation process showed that the traditional row arrangement was criticized by the students mainly because of the lack of group work between groups of friends. Therefore, FGS was applied in the next stage.

5.8.2. Action Step 1

At the beginning of the first action step, which took place over five weeks from the second week of May to the third week of June 2022, the peer nomination method was used to identify existing friend groups among participants. Students were asked to write down the names of three classmates they wanted to sit next to. Based on this information, the seats were divided into groups according to friend groups. Seven groups were formed with 3-4 students in each. Again, reflection on the action was carried out through observations and journal entries by the teacher-researcher. The results of another English test administered at the end of May were used as quantitative data for this cycle. The questionnaire about FGS allowed students to reflect on this cycle. In the semi-structured interviews, students often criticized this seating arrangement because it resulted in side conversations among close friends. Considering the aforementioned importance to learning and assuming to prevent side-talk during class, the next action step included LGS.

5.8.3. Action Step 2

The second action step was conducted from the fourth week of September to the end of October 2022. First, the PLSPQ constructed by Reid (1987) was administered to participants. The questionnaire includes six categories: visual, auditory, kinesthetic, tactile, group, and individual learning. Students with the same learning preferences were grouped together. Interestingly, none of the students belonged to visual or auditory learners. Since most of the students were kinesthetic learners, three groups were formed with these students. Two groups were formed with individual learners and one with group learners. One group included tactile learners. There were mainly 4 students in the groups. Students were informed of their main learning style preferences. Grouping by learning styles was applied for 5 weeks, during which the teacher-researcher conducted observations. As with the previous steps, diary entries were another source of qualitative data in this action step. The teacher-developed questionnaire on LGS was used to examine how students perceive their academic performance and participation when seated in groups by learning styles. Quantitative data obtained through the English exam administered in October were triangulated through semi-structured interviews.

5.9. Data Analysis

5.9.1. Qualitative Measures

Grounded Theory Coding (GTC) (Glaser & Strauss, 1967, p. 101), defined as a "*constant comparative method*," was used to analyze the qualitative data obtained from various sources during this study. Reading through the raw data allowed for an overview of the data at the outset. In the open coding phase, emerging themes and categories were identified. New data were continuously incorporated into the analysis by grouping similar patterns or forming additional theoretical categories. After analyzing the relationships between themes, similar categories were grouped and ordered in the axial coding phase. Finally, core categories were identified in the selective coding phase (Corbin & Strauss, 1990). To ensure accuracy of the data and achieve objectivity, the advisor, as a second coder, independently coded the same data. Discrepancies were resolved through discussion and necessary changes were made collaboratively.

5.9.2. Quantitative Measures

Due to small sample size and skewed data distribution non-parametric tests were employed to test the hypotheses of the current study. The demographic characteristics of the participants were compared using the Mann-Whitney U test. Furthermore, mean ± standard deviation (SD), median (min-max), frequency (percent), or mean ranks (MRs) and relative treatment effects (RTEs) were used to describe the data statistically. Regarding that the measurements of three time points for each student were dependent, a rank-based non-parametric method offered by Brunner and Puri (2001) was used for the analysis of longitudinal data. An analysis of variance (ANOVA)- type test statistic was used to examine the group effect, the time effect, and the effect of their interaction. The RTEs were the descriptive point estimators and can be defined as the probability that a randomly chosen measurement from a specific time point and/or group under observation tends to result in a larger value than a randomly chosen measurement from the whole data set regardless of time point and/or group under observation. The F1-LD-F1 design was employed to analyze the repeated measurements administered to the participants. Three hypotheses of ‘no time’, ‘no group’, and ‘no time and group interaction’ effects were tested. The null hypothesis of no effect is assumed to be true, if the RTE reaches a value of 0.50 showing that a tendency for higher or lower scores does not exist. In case of significant interaction **s**imple effects tests are conducted to investigate the nature of the interaction by examining the difference between groups within each level of the independent variables. All analyses were performed in SPSS v24 and R v.4.1.1 with

"nparLD" library used for non-parametric repeated F1-LD-F1 designs (Noguchi et al., 2012). A p-value of 0.05 or less was considered statistically significant.

5.10. Reliability

The concept of reliability states that a report is considered reliable if it is characterised by the ability to be repeated by other researchers (Schwandt, 1997). In another view, the words 'consistency and method' are emphasised in explaining reliability: a method is reliable if other researchers reach the same results. The first definition emphasises the results by using the phrase 'report', while the second emphasises the research method used. Indeed, these definitions emphasise different aspects. If the study is reliable, any reader of the study or any other researcher must come to the same results, the same interpretation, and the same conclusions. However, there is also an opposing view of replicability. Walker (1989) states that educational situations are hardly replicable. One possible reason is that people's feelings, behaviours, views, etc. can change even within a second. One may like X in one minute, but that preference may change two minutes later. Another difficulty in replicating educational situations is the problem of context dependence. If we conduct a study twice in the same context, with the same participants, and with the same research questions, we may get answers like "as I said, as my friend said". Replicability implies that readers of the study or article must have the same feelings about the method used, data collection, and interpretation as the author of the study if the study is reliable. That is, there is implicit agreement or concurrence between the readers of the study and the researcher regarding reliability.

The researcher attempted to achieve study reliability by triangulating the data and subjects. Triangulation was performed in two ways. In the first form, triangulation was conducted using data collection instruments, looking for evidence from interviews, observations, and diary entries. In the second form, triangulation was conducted through human sources. When a participant expressed a view X, the researcher attempted to verify it by indirectly interviewing other participants. Another human source is a colleague who is knowledgeable about data analysis and coding. The final human source was to seek the expert opinion of the advisor. In conclusion, as the teacher-researcher, I prepared the initial analysis and coding, sometimes shared ideas with the colleague, but the final analysis was done by me and my advisor together.

5.11. Validity

Nunan (1992, p. 14) states that "*validity, [...], has to do with the extent to which a piece of research actually investigates what the researcher purports to investigate*." From this point of view, validity means that the research questions/research hypotheses are followed or adhered to. If it is a qualitative research, it usually has either objectives or research questions. If it is a quantitative research, it usually has a hypothesis. The researcher adheres to the design from the beginning to the end of the study to validate the study. In other words, there is no abandonment or change of objectives or hypotheses in the middle of the study, and all objectives or hypotheses are examined equally. In short, none of the hypotheses are considered more or less important.

In addition, two types of validity, among others, are usually mentioned in scientific studies, namely internal and external validity (Zeller, 1997). The former refers to the consideration of variables (events) in research findings, while the latter refers to generalisation from the sample to the population (Yin, 1989). In the context of AR, there seem to be two different views. While the first view states that "*generalisations are unlikely*" (Argyris & Schön, 1991, p. 86), influential figures in AR, Ebbutt & Elliott (1985, p. 11) suggest that "*an account can be externally valid if the insights it contains can be generalised beyond the situation(s) studied*." It means a result or finding can be generalised if the situation, context, participants, etc. are the same. It can be inferred that this is also true for case studies because Elliott (1990, p. 59) states that "*A case study which describes a situation as an instance of a class [...] can be generalised to other instances which fall within the same class".*

Triangulation (Elliott, 1991), **"***checking out rival explanations"* (Hopkins, 1996) and replication, are some of the tactics to validate the study. The researcher attempted to validate the study by drawing evidence from multiple sources and looking for the same claims, ideas, or themes in the data. As a result, the goal of the study was not to generalise the findings, and as can be seen in Chapter 3 (3.4. Literature Review), there were only a limited number of studies that focused on seating arrangements in ELT, and only three of them were conducted in different contexts in Turkey. Accordingly, there is a need for further research on seating arrangements, and this topic will be revisited in the part describing the implications of the study.

5.12. Summary

In this chapter, the procedures for collecting and managing data were described. In quantitative studies, data analysis is usually conducted after data collection, whereas in qualitative research, data collection and data analysis occur simultaneously (Creswell, 2012). The present study included cycles of action and reflection with the aim of gaining a better understanding of the current situation and designing appropriate action plans. Therefore, data analysis was conducted simultaneously with data collection.

For qualitative data analysis, inductive data analysis based on the formation of categories and themes was used (Creswell, 2012).

For quantitative data analysis, inferential statistics including comparisons within and between groups were used (Hayes & Blackledge, 1998).

CHAPTER VI

RESULTS AND FINDINGS

6.1. Introduction

The purpose of this chapter is to provide a comprehensive descriptive analysis of the results and findings obtained from various data sources, namely questionnaires, observations, interviews, diary entries, and formal examination grades. The data analysis revealed that there are some common issues such as satisfaction with row seating or dissatisfaction with row seating. Therefore, it was hypothesised that it would be more useful to present a common theme or point to save space and time rather than presenting the positive and negative views of each student. Presenting the same evidence or themes under one heading is also consistent with qualitative data analysis, i.e., the policy of data reduction (Miles & Huberman, 1994, p. 10). As McLean (1995) states, because researchers in AR studies are looking for answers to pre-determined research questions, I provided an overall account of themes for each questionnaire, interview, and observation. In this context, the first phase (fieldwork), related to traditional row seating, and its general findings are presented. Then, the first action plan for the FGS and its general results are presented. Finally, the second action plan, related to the LGS, and its results are explained.

6.2. Fieldwork (1st stage)

6.2.1. Analysis of the questionnaire on traditional row arrangement

A total of 26 students participated in the study and three teacher-developed questionnaires were administered to investigate students' perceptions of different classroom layouts in English courses. Students' responses to the questionnaire on traditional row arrangement are given in Table 6.1.

Table 6.1 Frequencies related to students' perceptions of traditional row arrangement

Questions	**Yes**	**No**	**Alone**	**Total**
	n (%)	**n (%)**	**n (%)**	**n (%)**
1. Opportunity to choose deskmate	14 (% 53,8)	2 (% 7,7)	10 (%38,5)	26 (%100)
2. Happiness with current deskmate	16 (% 61,5)	-	10 (%38,5)	26 (% 100)
3. Deskmate's influence on academic achievement	17 (% 65,4)	9 (% 34,6)	-	26 (% 100)
4. Interrelation between seat location and academic achievement	21 (% 80,8)	5 (% 19,2)	-	26 (% 100)

5. Interrelation between seating arrangement and academic achievement	21 (% 80,8)		5 (% 19,2)	-	26 (% 100)
6. Familiarity with different seating arrangements	5 (% 19,2)		21 (% 80,8)	-	26 (% 100)
	Traditional		**U-shaped**		**Total**
	n (%)		**n (%)**	-	**n (%)**
7. Past experiences with different seating arrangements	21 (% 80,8)		5 (% 19,2)	-	26 (% 100)
	Back row		**No change**	**Front row**	**Total**
	n (%)		**n (%)**	**n (%)**	**n (%)**
8. Preference for seat location	3 (% 11,5)		13 (% 50)	10 (%38,5)	26 (% 100)
	Yes		**No**		**Total**
	n (%)		**n (%)**	**n (%)**	**n (%)**
9. Happiness with rows and columns seating in English courses	24 (% 92,3)		2 (% 7,7)	-	26 (% 100)
10. Impact of rows and columns arrangement on engagement	15 (% 57,7)		11 (% 42,3)	-	26 (% 100)
	1	**2**	**3**	**4**	**5**	**Total**
	n (%)	**n (%)**	**n (%)**	**n (%)**	**n (%)**	**n (%)**
11. Self-evaluation in terms of participation	1 (%3,8)	3 (%11,5)	7 (%26,9)	7 (%26,9)	8 (% 30,8)	26 (% 100)

Of the students seated in pairs (n=16), only one student indicated that the teacher determined her table neighbor. Notably, all students were satisfied with their deskmates (n=16). Of the 26 students, 17 students (65%) felt that deskmates interfered with each other's academic performance, while 9 students (35%) held the opposite view. The fifth question examined how students viewed the relationship between seating arrangements and academic performance. It is worth noting that 21 students (81%) agreed that seating arrangement affects academic performance, while 5 students (19%) disagreed with this opinion. Out of 26 students, 6 students (23%) indicated that their teachers had used other classroom layouts in the past, for example the U-shaped arrangement. These results confirm the hypothesis that the traditional row arrangement is the most commonly used seating arrangement in Turkish schools. It is noteworthy that it is not the type of activities but the teacher's teaching style that determines the seating arrangement (Fernandes et al., 2011). The following diary entry relates to this point:

> *"As long as teachers only use the traditional row arrangement they cannot discover the benefits of other seating arrangements during their courses. In my opinion, and as the review of literature indicated, seating arrangement should be adjusted to the content of activities and learning objectives."* (diary, fieldwork)

Interestingly, the majority of students (92%) favoured the traditional row arrangement in English courses. The most frequently mentioned factor in the questionnaire and interviews was the clear view of the teacher and the blackboard. Fifteen students (58%) felt that the traditional row arrangement interfered with their engagement in English class, but 11 students (42%) did not believe it interfered. One student commented on this point during the interview as follows:

"The rows and columns arrangement does not facilitate groupwork. In English lessons most activities rely on groupwork and students would be able to complete different activities easier if they had a chance to work with their classmates. Sometimes I cannot complete the tasks which affects my participation negatively." (interview, fieldwork)

6.2.2. Students' perceptions of traditional row arrangement

The last two questions were open-ended and students could write down their personal views on the advantages and disadvantages of the traditional row arrangement. The data collected through the open-ended questions were coded and categorized.

Content analysis of the responses to the first open-ended question revealed that the traditional row arrangement was considered advantageous due to its benefits in relation to five aspects: View of the board (N=10); listening to the teacher (N=7); participation (N=6); the ability to sit with a close friend (N=5); collaboration with the deskmate (N=5); and the ability to sit alone (N=3).

On the other hand, students criticised the traditional row arrangement because of its disadvantages in the back rows. Responses to the second question showed that students were dissatisfied with the traditional row arrangement because of the lack of opportunity for group work (N=7), conversations and noise (N=4), distractions from conversations in the back rows (N=4), and distance (N=3). Not only the distance to the teacher and the blackboard, but also the distance to groups of friends was mentioned as a disadvantage of this classroom arrangement.

6.2.3. Analysis of Interviews

Interview questions explored students' perceptions of traditional row arrangement in English courses. Interview data collected from a subset of 10 students were transcribed and analysed by GTC. After reading through the transcripts to get an overview of the data, similar patterns were grouped and theoretical categories were formed (see Table 6.2). Following the table, the positive and negative aspects of the interviews are discussed.

Table 6.2 Students' perceptions of traditional row arrangement

Themes	Categories	Frequency of codes (N)
Positive Views on Traditional Row Arrangement	Facing the teacher	6
	Front rows	5
	Facing the board	4
	Pairwork	3
	Individual work	3
	Interaction with teacher	2
	Total	**23**
Negative Views on Traditional Row Arrangement	No group work	5
	Back rows	5
	Chatting	4
	Physical features	4
	Focus on the center	2
	Total	**20**

6.2.3.1. Positive views on traditional row arrangement:

Most of the students stated that they liked the traditional row arrangement (N=23), especially because they could see and hear the teacher well (N=6). They also stated that the front rows were more advantageous than the back rows (N=5) because they could interact with the teacher more often (N=2). One respondent expressed her thoughts as follows:

"I like this arrangement because the students face the teacher and vice versa. Everybody can listen to the teacher properly. I am happy to sit in the front row. The front rows are advantegous because you can interact with the teacher more often. Students in the front rows are luckier because they have a better chance to participate in lessons. The teacher sees them more easily." (interview, fieldwork)

Some students were pleased with the traditional row arrangement due to a clear sight of the board (N=4). In addition, sitting in the front rows provides students with the opportunity to participate more actively in class communication (Totusek & Staton-Spicer, 1982).

"It is important for students to be able to see the board and other materials being used by the teacher. The traditional row arrangement enables a clear sight and we can focus on the teacher and the knowledge being taught." (interview, fieldwork)

While some students appreciated the opportunity to work in pairs (N=3), others were content to work individually in the row and column arrangement (N=3).

6.2.3.2. Negative views on traditional row arrangement

In addition to positive views, students also expressed negative views of the traditional row arrangement (N=20). As with the responses to the open-ended questions in the questionnaire, they criticized the traditional row arrangement for not facilitating group work (N=5):

"It would be better if we could perform the activites collaboratively during the lessons. Students with low academic achievement could ask for help and this would promote their motivation towards the learning English." (interview, fieldwork)

The back rows were found to be particularly disadvantegeous because of the distance from the teacher and the blackboard. (N=5). Additionally, students complained about chatting in the back rows (N=4). One student explained this point as follows:

"Back rows are disadvantegeous because there is a distance to the teacher and the board. Students sitting in the back rows tend to chat and there is sometimes noise. Therefore, the students sitting in the back rows are confronted with distraction which affects their academic achievement negatively." (interview, fieldwork)

Finally, students felt that the traditional row arrangement placed an extreme emphasis on the front and middle rows (N=2):

" The teachers usually focus on students sitting in the front and middle rows. These students are able to participate in lessons more often. The students in the back rows have to struggle more in order to be noticed by the teacher when they want to participate. I think that students in the front rows are luckier because they are near to the board and to the teacher. As a consequence they get higher grades. We should adopt seating arrangements which minimize inequalities." (interview, fieldwork)

6.3. Analysis of Observational Data

As noted in Chapter Five (see 5.7.7.), multiple observations were made for each seating arrangement, but key points were included to reflect each seating arrangement. Each observation note included in each action plan was intended to provide a holistic picture of the fieldwork, Action Plan 1, and Action Plan 2. Observations prior to implementation of the action plans yielded the following results. Classroom observations showed that students in the front rows felt better with the traditional row arrangement. In other words, only the students who sat in the back rows participated more actively in class. In the back rows and in the rows far away from the teacher, there was more frequent off-task behaviour. These students seemed demotivated and isolated from class interaction. In addition, student-teacher interactions occurred more frequently in the front rows. In addition, student-student interaction rarely occurred in the traditional row arrangement. Students who were not in the action zone did not

actively participate in class, which led to side conversations. The teacher-researcher recorded this situation in the observation notes as follows:

"Students in the front rows by the window (there is also the teacher's table) are highly motivated. They participate in the lesson actively. Students at the back rows of the middle column rarely participate in the lessons. They sometimes forget their study materials at home. They do not ask questions. Unfortunately, they are usually off-task."

(observation notes, fieldwork)

Students in the back rows often complained that they could not see the board well when they had to take notes. Students in the front rows were more willing to ask questions when they needed the teacher's help. Since only deskmates could work together during activities, the traditional row arrangement was not useful for group activities (see Picture 6.4). Overall, observations revealed that classroom engagement was lower in the traditional row arrangement than in the group arrangement.

Picture 6.4 Traditional seating arrangement

6.4. The impact of students' responses to the questionnaire on traditional row arrangement on test scores

As mentioned in Chapter five (see 5.7.9.), formal and written examinations were mandatory in schools in Turkey. Accordingly, students' results from three written exams administered at the end of each action plan were obtained and analyzed in terms of their responses to teacher-developed questionnaires administered during each action plan. The effects of the groups formed by students' responses to the first questionnaire (e.g., yes/no, positive/negative) on students' exam scores were analyzed using ANOVA type statistics. The results of this analysis are presented in Table 6.3.

Table 6.3 Non- parametric mixed ANOVA results (F1-LD-F1 model) for questionnaire 1

Questions and groups	n	E1		E2		E3		Total		Group		Time		Group*Time	
		RMs	RTE	RMs	RTE	RMs	RTE	RMs	RTE	Fn	p	Fn	p	Fn	p
1. Opportunity to choose deskmate															
Yes	**14**	39.89	0.51	37.54	0.47	48.25	0.61	41.89	0.53						
Alone	**10**	26.90	0.34	35.75	0.45	41.30	0.52	34.65	0.44	2.40	0.11	2.24	0.13	0.44	0.58
No	**2**	45.25	0.57	35.25	0.45	60.50	0.77	47.00	0.60						
Total	**26**	37.35	0.47	36.18	0.46	50.02	0.63			No significance detected among Rank Means					
2.Happiness with current deskmate															
Yes	**16**	40.56	0.51	37.25	0.47	49.78	0.63	42.53	0.54	1.55	0.21	2.86	0.07	0.70	0.46
Alone	**10**	26.90	0.34	35.75	0.45	41.30	0.52	34.65	0.44						
Total	**26**	33.73	0.43	36.50	0.46	45.54	0.58			No significance detected among Rank Means					
3.Deskmate's influence on academic achievement															
Yes	**17**	32.09	0.40	35.62	0.45	48.50	0.62	38.74	0.49	0.08	0.78	2.17	0.13	1.22	0.29
No	**9**	41.39	0.52	38.67	0.49	42.78	0.54	40.94	0.52						
Total	**26**	36.74	0.46	37.14	0.47	45.64	0.58			No significance detected among Rank Means					
4. Interrelation between seat location and academic achievement															
Yes	**21**	37.98	0.48	39.29	0.50	49.74	0.63	42.33	0.54	7.79	**0.01**	1.55	0.21	0.04	0.89
No	**5**	24.10	0.30	25.70	0.32	33.00	0.42	27.60	0.35						
Total	**26**	31.04	0.39	32.49	0.41	41.37	0.52			Yes>No					
5. Interrelation between seating arrangement and academic achievement															
Yes	**21**	39.05	0.49	39.93	0.51	50.12	0.64	43.03	0.55	14.82	0.00	4.73	**0.01**	0.05	0.92
No	**5**	19.60	0.24	23.00	0.29	31.40	0.40	24.67	0.31						
Total	**26**	29.32	0.37	31.46	0.40	40.76	0.52			Yes>No----E1=E2<E3					
6. Familiarity with different seating arrangements															
Yes	**5**	34.20	0.43	20.40	0.26	25.00	0.31	26.53	0.33	10.09	**0.00**	0.77	0.41	2.14	0.14
No	**21**	35.57	0.45	40.55	0.51	51.64	0.66	42.59	0.54						
Total	**26**	34.89	0.44	30.47	0.38	38.32	0.48			Yes<No					
7. Past experiences with different seating arrangements															
Traditional	**21**	35.57	0.45	40.55	0.51	51.64	0.66	42.59	0.54	10.09	**0.00**	0.77	0.41	2.14	0.14
U-shaped	**5**	34.20	0.43	20.40	0.26	25.00	0.31	26.53	0.33						
Total	**26**	34.89	0.44	30.47	0.38	38.32	0.48			Traditional>U-shaped					
8. Preference for seat location															
Front row	**10**	45.65	0.58	37.45	0.47	45.00	0.57	42.70	0.54						
No change	**13**	31.54	0.40	35.27	0.45	47.69	0.61	38.17	0.48	0.38	0.66	3.51	**0.04**	1.67	0.19
Back row	**3**	17.17	0.21	40.17	0.51	46.50	0.59	34.61	0.44						
Total	**26**	31.45	0.40	37.63	0.48	46.40	0.59			E1=E2<E3					
10.Happiness with rows and columns seating in English courses															
Yes	**24**	35.38	0.45	38.44	0.49	46.02	0.31	39.94	0.51	0.18	0.67	3.17	0.07	1.46	0.23
No	**2**	34.50	0.44	15.50	0.19	52.50	0.66	34.17	0.43						
Total	**26**	34.94	0.44	26.97	0.34	49.26	0.63			No significance detected among Rank Means					
11.Impact of rows and columns arrangement on engagement															
Yes	**15**	37.27	0.47	31.77	0.40	45.67	0.31	38.23	0.48	0.17	0.68	3.44	**0.04**	1.51	0.22

No	**11**	32.64	0.41	43.36	0.55	47.68	0.66	41.23	0.52								
Total	**26**	34.95	0.44	37.57	0.48	46.67	0.59			E1=E2<E3							
12. Self-evaluation in terms of participation																	
2	**3**	22.33	0.29	33.33	0.44	41.50	0.55	45.63	0.60								
3	**7**	20.14	0.26	30.79	0.40	32.57	0.43	27.83	0.36								
4	**7**	38.86	0.51	30.57	0.40	56.14	0.74	41.86	0.55	1.84	0.14	3.65	**0.03**	0.82	0.50		
5	**8**	45.50	0.60	42.75	0.56	48.63	0.64	32.39	0.43								
Total	**25**	31.71	0.42	34.36	0.45	44.71	0.59			E1=E2<E3							

E1: First exam scores, E2: Second exam scores, E3: Third exam scores, Fn: Anova type statistic, df: degrees of freedom, p: statitical significance

The results demonstrated that there was no significant interaction between group and time and test scores ($p>.05$). Therefore, analyses on simple effects were not performed. However, the main effects were evaluated and results indicated that there was a significant difference in terms of mean ranks between groups for question 4 ($Fn=7.79$, $p<0.05$). Specifically, the group approving of an interaction between seat location and academic achievement had higher test scores and therefore higher rank means (RM=42.33, RTE=0.54) than the group of students disapproving of an interaction (RM=27.60, RTE=0.35). Similarly, the main effect of group was statistically significant for question 5 ($Fn=14.82$, $p<0.01$). Students who accepted that an interaction between seating arrangement and academic achievement existed had higher rank means (RM=43.03, RTE=0.55) than students who did not (RM=24.67, RTE=0.31). Likewise, the main effect of time was found statistically significant ($Fn=4.73$, $p<0.05$) for question 5. The results of pairwise comparisons showed that rank means of students' test scores at the three time points were statitically different ($Fn=4.73$, $p<0.05$). In other words, students' test scores were lower at the first and second exam (RM1=29.32 and RM2=31.46 respectively) than their test scores at the third exam (RM=40.76).

6.5. Summary of Findings

The results of the questionnaire and interviews showed that the row arrangement is the most commonly used seating arrangement in Turkish educational contexts. Most participants agreed that there is a relationship between seating arrangement and academic performance. The clear view of the teacher and the blackboard was the most frequently cited advantage of this arrangement. However, disadvantages such as lack of group work and disruptive behaviour in the back rows were highlighted by both the teacher and students. In addition, communication between students was found to be infrequent and on-task behaviour was more common in the front rows. Quantitative analyses showed that students who believed that

seating arrangements affected academic performance scored higher on the first English test. Formal test scores showed that of the three English tests, scores on the first test were generally the lowest.

6.6. Action Plan 1

6.6.1. Analysis of the questionnaire on cluster seating (FGS)

The first action plan involved FGS. To explore students' thoughts of this group arrangement, the second teacher-developed questionnaire was administered. The frequencies of students' responses to the questionnaire on FGS are shown in Table 6.4.

Table 6.4 Frequencies related to students' perceptions of cluster seating acoording to friend groups

Questions	**Positive**	**Negative**	**Total**
	n (%)	**n (%)**	**n (%)**
1. Perception of change in seating arrangement	19 (% 73,1)	7 (% 26,9)	26 (% 100)
2. Impact of sitting with friends on attitudes towards coıurses	19 (% 73,1)	7 (% 26,9)	26 (% 100)
	Yes	**No**	**Total**
	n (%)	**n (%)**	**n (%)**
3. Impact of sitting with friends on participation in English lessons	17 (% 65,4)	9 (% 34,6)	26 (% 100)

	1	**2**	**3**	**4**	**5**	**Total**
	n (%)	**n (%)**	**n (%)**	**n (%)**	**n (%)**	**n (%)**
4. Self-evaluation in terms of participation	2 (% 7,7)	2 (% 7,7)	7 (% 26,9)	10 (% 38,5)	5 (% 19,2)	26 (% 100)

	Yes	**No**	**Total**
	n (%)	**n (%)**	**n (%)**
5. Impact of friend groups on academic achievement in English courses	13 (% 50)	13 (% 50)	26 (% 100)
	only in English	**in all courses**	**Total**
	n (%)	**n (%)**	**n (%)**
6. Preference for cluster seating according to friend groups	16 (% 61,5)	10 (% 38,5)	26 (% 100)

Of the 26 students, 19 (73%) were positive about the change in classroom layout, while 7 students (27%) were not satisfied with it. The same percentage applied to the second question, which asked how students felt about the impact of sitting with friends on attitudes towards classes. In other words, most students felt that sitting with close friends had a positive impact on their attitudes toward English courses.

Seventeen students (% 65) felt that sitting with friends had a positive impact on their participation in English classes. For example, one of the students stated that the more she

could do the activities with her friends, the more she could participate in the class. On the other hand, 9 students (% 35) explained that their participation decreased since the seats were divided by friend groups they talked next to each other. In contrast to the front row seating interviews (%31), the number of students giving themselves 5 points for participation decreased in this questionnaire (%19). The following diary entry underlines this point as follows:

"Most of the students are happy to sit with their close friends and they seem more motivated during the lessons. Students who can accomplish the activities with the help of their friends are more active now. However, some students get easily distracted because of side-talking". (diary, action plan 1)

Lastly, 16 students (% 62) believed that FGS should only be applied in English courses.

6.6.2. Students' perceptions of cluster seating (FGS)

The last two questions were open-ended questions that asked students to write down their personal views on the advantages and disadvantages they experienced under this action plan. The data collected through the open-ended questions were coded and categorized.

Analysis of the responses to the first open-ended question in this questionnaire revealed that seating arrangements in friendship groups were perceived as beneficial due to their advantages in terms of five aspects: Collaboration (N=12), participation (8), motivation (N=7), sharing experiences (N=5), and better grades (N=3).

Responses to the second question indicated that students disliked group seating by friend groups for the following reasons: Conversation and noise (N=14); not having a clear view of the board and other materials used (N=7); distraction from noise (N=4); and not being able to see and hear the teacher clearly (N=4).

The following diary entry touches on the same themes and summarizes the thoughts of the teacher-researcher on FGS:

"The students are more active and motivated in the lessons when seated in clusters. The classroom interaction involves more student-student interaction during the activities which promoted their on-task behaviour. On the other hand, side-talking increased in this arrangement because close friends sit together in groups now."

(dairy, action plan 2)

6.6.3. Analysis of interviews

Interview data (N=10) was transcribed and analyzed on the basis of GTC. After making a general sense of the data through reading and re-reading, similar patterns were grouped and

theoretical categories were formed. Table 6.5 demonstrates emerging themes (2) and categories (9). Representative quotations taken from the transcripts are given below.

Table 6.5 Students' perceptions of cluster seating according to friend groups

Themes	Categories	Frequency of codes (N)
Advantages of Cluster Seating according to Friend Groups	Group work	7
	Positive classroom atmosphere	6
	Motivation	5
	Participation	4
	Higher grades	2
	Total	**24**
Disadvantages of Cluster Seating according to Friend Groups	Chatting and noise	8
	No clear sight of the board	5
	Distraction	4
	Uneven contribution	3
	Total	**20**

6.6.3.1. Positive views on cluster seating (FGS)

In general, students indicated that they were satisfied with their seating, adding that group seating by friend groups was beneficial for group work (N=7). They especially emphasised that the atmosphere in the classroom was friendlier than before (N=6). One participant described her experience as follows:

"In cluster arrangement we have the opportunity to help each other during the activities and this makes the classroom atmosphere positive. Previously, I was sitting alone and I did not have the chance to do group work during the activities. In cluster arrangement we can share knowledge and our learning experiences and I think that this is useful in learning English." (interview, action plan 1)

Some respondents noted that a positive class climate contributed to their motivation (N=5) and academic performance (N=2):

"Since we started to sit in clusters I realized that I can learn English more easily. I am not worried about completing the tasks anymore because we are allowed to do group work. I feel more motivated towards learning English. My grades are higher now and I feel happy." (interview, action plan 1)

According to some other students, participation was another aspect that had a positive effect on friend group cluster seating (N=4):

"Formerly, I could not complete the activities and I preferred not to participate in the lessons. Now I am able to accomplish the activities in my group. Being able to complete the tasks encourages me to engage in the lessons." (interview, action plan 1)

6.6.3.2. Negative views on cluster seating (FGS)

Group seating established by groups of friends was criticized primarily for chatter and noise during lessons (N=8). Students noted that talking among close friends caused interruptions and distractions during class (N=4):

> *"I think that some students believed that cluster arrangement was an opportunity to chat with their close friends during the lessons. As soon as they completed the activities they started to chat and there was some noise. Students who had not finished the activities yet could not focus on their studies."*
>
> (interview, action plan 1)

Some students pointed out that they had trouble seeing the board well because their desks were not arranged in a straight line, as was the case with the traditional seating arrangement:

> *"I prefer the traditional seating arrangement because the desks are arranged straight and we have a clear sight of the board. I had difficulties in taking notes."*
>
> (interview, action plan 1)

Finally, the unequal contribution of students during group work was considered a disadvantage of the friend groups (N=3). Students emphasised that some of their friends did not put in enough effort during the activities:

> *"I had to accomplish most of the activities on my own. My friends did not help me, but they pretended to do so. I thought that this was unfair, but I could not warn them because they are my close friends."* (interview, action plan 1)

6.7. Analysis of Observational Data

In the FGS, it was observed that students had a positive attitude towards the courses. They appreciated sitting near their close friends and were therefore more motivated. Observations revealed that the more students were involved in group work, the more positively they responded to the lessons. The following observation notes relate to this point:

> *"The students ask each other questions during the activities and even students who seemed to be less-able in the traditional arrangement are able to complete the activities now. These students are happy to participate in the lessons more often. The students do not hesitate to ask questions as they did before."* (observation notes, action plan 1)

In addition, on/off task behaviour was more balanced in this arrangement. None of the students seemed isolated from in-class interaction (see Picture 6.5). Student-student interaction had a positive effect on on-task behaviour during activities. It was also observed that the class atmosphere was much friendlier in the clusters organised by friend groups. On

the other hand, observations revealed that talking next to each other during class was a problem. As students noted in the interviews, sitting near close friends led to side conversations, which in turn led to distractions. However, some students did not seem to contribute during group work.

Picture 6.5 Cluster seating according to friend groups (FGS)

6.8. The impact of students' responses to the questionnaire on cluster seating(FGS)on test scores

The results of ANOVA-type statistics showing the impact of groups related to students' responses to the second questionnaire on their exam scores are provided in Table 6.6.

Table 6.6 Non- parametric mixed ANOVA results (F1-LD-F1 model) for questionnaire 2

Questions and groups	n	E1		E2		E3		Total		Group		Time		Group*Time	
		RMs	RTE	RMs	RTE	RMs	RTE	RMs	RTE	Fn	p	Fn	p	Fn	p
1. Perception of change in seating arrangement															
Positive	**19**	32.68	0.41	35.34	0.45	48.74	0.62	38.92	0.49	0.07	0.79	1.17	0.30	1.58	0.21
Negative	**7**	42.43	0.54	40.29	0.51	40.50	0.51	41.07	0.52						
Total	**26**	37.56	0.48	37.81	0.48	44.62	0.57			No significance detected among Rank Means					
2. Impact of sitting with friends on attitudes towards courses															
Positive	**19**	36.74	0.46	37.18	0.47	49.74	0.63	41.22	0.52	0.61	0.43	1.48	0.23	0.37	0.59
Negative	**7**	31.43	0.40	35.29	0.45	37.79	0.48	34.83	0.44						
Total	**26**	34.08	0.43	36.23	0.46	43.76	0.55			No significance detected among Rank Means					
3. Impact of sitting with friends on participation in English lessons															
Yes	**17**	34.09	0.43	35.68	0.45	49.71	0.63	39.82	0.50	0.02	0.90	1.99	0.15	1.01	0.34
No	**9**	37.61	0.48	38.56	0.49	40.50	0.51	38.89	0.49						
Total	**26**	35.85	0.45	37.12	0.47	45.10	0.57			No significance detected among Rank Means					
4. Self-evaluation in terms of participation															
1	**2**	30.75	0.39	35.50	0.45	25.50	0.32	30.58	0.39	0.64	0.58	2.94	0.07	1.26	0.28

2	**2**	24.75	0.31	31.75	0.40	49.25	0.63	35.25	0.45							
3	**7**	37.29	0.47	31.21	0.39	45.64	0.58	38.05	0.48							
4	**10**	30.35	0.38	37.60	0.48	49.75	0.63	39.23	0.50							
5	**5**	48.50	0.62	44.90	0.57	48.60	0.62	47.33	0.60							
Total	**26**	34.33	0.43	36.19	0.46	43.75	0.55			No significance detected among Rank Means						
5. Impact of friend groups on academic achievement in English courses																
Yes	**13**	22.65	0.28	42.46	0.54	46.77	0.59	37.29	0.47	0.39	0.53	4.95	**0.01**	11.84	**0.00**	
No	**13**	47.96	0.61	30.88	0.39	46.27	0.59	41.71	0.53							
Total	**26**	35.31	0.45	36.67	0.46	46.52	0.59			E1=E2<E3						
Within groups (Pairwise comparisons)																
Yes (E1) vs Yes (E2): Fn(1)=21.453, p<0.001 - Yes (E1) vs Yes(E3): Fn(1)=14.427, p<0.001 - Yes(S2) vs Yes(E3): Fn(1)=2.070, p=0.15																
No (E1) vs No (E2): Fn(1)=18.042, p<0.001– No (E1) vs No (E3): Fn(1)=0.105, p=0.75 - No (E2) vs No (E3): Fn(1)=7.799, p<0.01																
Between groups Mann Whitney U (MWU) test																
E1(Yes) vs E1(No): MWU=33.5, p=0.007 - E2(Yes) vs E2(No): MWU=58.0, p=0.186 - E3(Yes) vs E3(No): MWU=80.5, p=0.84																
6. Preference for cluster seating according to friend groups																
in English	**16**	36.75	0.46	40.03	0.51	44.03	0.56	40.27	0.51	0.10	0.76	4.03	**0.02**	1.26	0.28	
in all courses	**10**	33.00	0.42	31.30	0.39	50.50	0.64	38.27	0.48							
Total	**26**	34.88	0.44	35.67	0.45	47.27	0.60			E1=E2<E3						
E1: First exam scores, E2: Second exam scores, E3: Third exam scores, Fn: Anova type statistic, df: degrees of freedom, p: statistical significance																

The results showed that there was no significant interaction between group and time and test scores (p>.05) except the analysis for question 5. As the results were statistically significant for this question (Fn=11.84, p<0.00),an analysis of simple effects was performed.The results indicated that there was a stastitically significant differencein students' scores in the first exam regarding "yes" and "no" replying groups (MWU=33.5, p<0.01). That is, students who believed that sitting with friend groups would have an impact on academic achievement in English courses outperformed students who did not accept an interaction. Besides, an increase in mean ranks from MR_1=22,65 to MR_2=42,46 related to scores of the first and second exam within the group of students affirming an interaction indicated a statistically significant difference beween the groups (Yes (E1) vs Yes (E2): Fn(1)=21.453, p<0.001). In other words, mean ranks related to scores of students refusing an interaction between sitting with friend groups and academic achievement showed a statistically significant drop (No(E1) vs No(E2): Fn(1)=18.042, p<0.001) from MR_1=47.96 to MR_2=30.88.

6.9. Summary of Findings

In summary, the results of this action plan show that students appreciated the change in classroom design. Group work with friends in the FGS created a positive classroom atmosphere, which in turn created a positive attitude toward the EFL courses. Nevertheless,

most students preferred group work with friends only in English courses. The results of the questionnaire about FGS and observational data showed that talking among friends had a negative effect on classroom engagement. In addition, uneven participation in tasks, i.e., free-riding (McArdle et al., 2005), was another disadvantage mentioned by the teacher and students. Quantitative measures showed that the test scores of students who rejected a relationship between seating arrangements and academic achievement declined significantly. The opposite was true for students who believed that seating arrangement had an impact on academic performance.

6.10. Action Plan 2

6.10.1. Analysis of the PLSPQ

The PLSPQ (Reid, 1987) consisting of 30 items involves responses based on a 5-point Likert scale. A score between 36 and 50 indicates the major learning style preference, a score between 25 and 37 indicates minor learning styles and learning styles with a score of 24 and less are not significant. The questionnaire elicits six categories of learning preferences: Students with a high score in the items 6, 10, 12, 24 and 29 are classified as visual learners. Auditory learners receive more points in items 1, 7, 9, 17 and 20. Kinesthetic learners have higher scores in items 2, 8, 15, 19 and 26. Items 11, 14, 16, 22 and 25 are related to tactile learning style. Students with a higher score in items 3, 4, 5, 21 and 23 have a preference for learning in groups whereas students scoring high in items 13, 18, 27, 28 and 30 prefer learning individually. Scores were calculated manually and results showed that most of the students were kinesthetic learners (N=12). The second most frequent category consisted of individual learners (N=7). Group learners (N=4) and tactile learners (N=3) were further identified learning style categories whereas none of the students were visual or auditory learners. The results of the questionnaire allowed the formation of groups of students with the same learning preferences when creating clusters according to learning styles.

6.10.2. Analysis of the questionnaire on cluster seating (LGS)

Students were grouped according to their learning styles using the PLSPQ. According to this classification, 12 kinesthetic learners, 7 individual learners, 4 group learners, and 3 tactile learners appeared. The third teacher-developed questionnaire explored students' views on LGS and frequencies related to students' responses are shown in Table 6.7.

Table 6.7. Frequencies related to students' perceptions of cluster seating according to learning styles

Questions	Yes	No	Total
	n (%)	n (%)	n (%)
1. Awareness of predominant learning style	26 (% 100)	0	26 (% 100)
2. Having received guidance from school counselor	23 (% 88,5)	3 (% 11,5)	26 (% 100)

	Kinesthetic	Individual	Group	Tactile	Total
3. Predominant learning style	12 (%46,2)	7 (%26,9)	4 (%15,4)	3 (%11,5)	26 (%100)

	Positive	Negative	Total
	n (%)	n (%)	n (%)
4. Perception of change in seating arrangement	21 (%80,8)	5 (%19,2)	26 (%100)

	Yes	No	Total
	n (%)	n (%)	n (%)
5. Impact on attitudes towards courses	20 (%76,9)	6 (%23,1)	26 (% 100)
6. Impact on participation in English lessons	18 (%69,2)	8 (%30,8)	26 (% 100)

	1	2	3	4	5	Total
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
7. Self-evaluation in terms of participation	2 (%7,7)	1 (%3,8)	8 (%30,8)	7 (%26,9)	8 (%30,8)	26 (% 100)

	Yes	No	Total
	n (%)	n (%)	n (%)
8. Impact on academic achievement	16 (% 61,5)	10 (% 38,5)	26 (% 100)
9. Change of deskmates	10 (% 38,5)	16 (% 61,5)	26 (% 100)

	Friend groups	Learning styles	Total
10. Prefernece for seating arrangement	11 (% 42,3)	15 (% 57,7)	26 (%100)

All participants (%100) indicated that they were aware of their predominant learning style. However, 3 of the students (%11) had not yet received guidance from the school counselor in this regard. As mentioned earlier, the learning styles of the participants were distributed as follows: 12 kinesthetic, 7 individual, 4 group, and 3 tactile learners. The majority of students (80%) had a positive opinion about the change in seating arrangement and felt that sitting with peers who had the same learning style affected their attitudes toward English instruction (77%). Similarly, 70% of students expressed that seating arrangements according to learning styles affected their engagement in English class. In addition, the number of students who rated themselves with 5 points – on a scale of 1 to 5 - for participation in class increased in the

third questionnaire (%31). The reason for the decrease in " side-talking" could be the change of group members (%70). The following diary entry written during LGS explains this point:

"As the students had to accomplish different kinds of activities corresponding to their learning styles and due to increased self-awareness the time they were on-task increased significantly. Furthermore, side-talking decreased because group memebers changed and some students in the groups are not close friends anymore. As a result, they can concentrate on the lessons and participate more often." (diary, action plan 2)

More than half of the participants (%62) believed that cluster seating according to learning styles affected academic achievement. One interviewee expressed her thoughts as follows:

" I must admit that my grades got higher when I stoppped chatting during the lessons. It was nice to sit together with our friend groups, but I couldn't concentrate on the activities. It is also very helpful to know about your learning style. You can choose learning strategies that fit your learning style when studying for the exams." (interview, action plan 2)

Students were asked to choose between groups with close friends and learning style groups. Fifteen of the students preferred to sit in groups in terms of their learning style (%58), while 11 students (%42) would rather sit with their friend group.

6.10.3. Students' perceptions of cluster seating (LGS)

The last two questions were open-ended, as with the questionnaires on row and column arrangement and seating in friend groups, and were designed to solicit students' personal opinions on this action plan with seating in groups by learning styles. The data collected with the open-ended questions were coded and categorized.

The first question asked students to write down how they would react if they were forced to sit with classmates with the same learning style, even if they were not close friends. The majority of students (N=21) indicated that they would ask the teacher to change the seating arrangement. Only a few students (N=5) indicated that they would try to get used to the new situation.

The analysis of the answers to the second open question in this questionnaire revealed that the group seating arrangement by learning styles was perceived as unfavourable with respect to three aspects: no possibility to sit with friends (N=8); distance from the teacher and the blackboard (N=5) and chatting (3). A considerable number of students (N=10) stated that they had no criticism of this arrangement.

6.11. Analysis of Interviews

The interview questions explored students' views on seating arrangements in English classes as determined by learning styles. Interview data were transcribed and analzed by GTC

(N=10). As shown in Table 6.8, the data yielded 2 themes and 9 categories Representative quotations taken from the transcripts are given subsequently.

Table 6.8 Students' perceptions of cluster seating according to learning styles

Themes	Categories	Frequency of codes (N)
Advantages of Cluster Seating according to Learning Styles	Self-awareness	9
	Higher grades	6
	Motivation	5
	Different activities	4
	Group work	3
	Total	**27**
Disadvantages of Cluster Seating according to Learning Styles	Distance to friends	6
	No clear sight of the board	5
	Distraction	3
	Distance to the teacher	2
	Total	**16**

6.11.1. Positive views on cluster seating (LGS)

Some of the interviewees indicated that they were not previously aware of their learning styles. They indicated that using appropriate learning strategies improved their academic performance (N=6). In addition, they indicated that knowing how they learn best increases their motivation (N=5).

"Previously, I have never thought about my predominant learning style. I tried different kind of techniques while studying but I could not find out which one was the most effective. I think that I got higher grades because I am aware of my preference for learning strategies now. I feel more motivated during the English courses."

(interview, action plan 2)

Some of the students (N=4) indicated that the tasks that corresponded to their learning styles and working in groups (N=3) had a positive effect on class participation and communication between students. One of the kinesthetic learners expressed her feelings as follows:

"Each group had to complete different kind of tasks during English courses. I was happy to act out dialogues with students who also enjoyed such activities. If there are different kind of learners in groups they do not participate in the activities equally."

(interview, action plan 2)

An individual learner described her positive experience with homogeneous groups of learners as follows, although she took a different perspective:

"I think that it is better to sit together with classmates who have the same learning style. I prefer learning individually and as all the group members had the same preference for learning we did not disturb each other." (interview, action plan 2)

6.11.2. Negative views on cluster seating (LGS)

Some of the students (N=6) indicated that they were not happy to be separated from their friends, and their reasons were presented in the following excerpt:

"Actually, all the group members had the same learning style and I like learning in groups, but I think that sitting together with friends is more important. It was not nice to sit with students who are not my close friends." (interview, action plan 2)

Students sitting in the back of the classroom complained about not having a clear sight of the board (N=5) and the distraction (N=3) caused by side-talking in back rows.

"I am of the opinion that sitting in the back of the classroom is always disadvantegeous no matter how the seating arrangement is organised. I get easily distracted by students who are talking. Therefore, I always prefer sitting in the front rows."
(interview, action plan 2)

Two of the respondents mentioned that the distance to the teacher was an obstacle for them in the courses and made a suggestion on this point:

"Our group was placed in the back of the classroom. I am an individual learner and therefore I priotirize learning on my own. However, I like to be near the teacher in order to ask questions when I need help. It would be useful if groups could change their location in the classroom for certain periods." (interview, action plan 2)

6.12. Analysis of Observational Data

Analysis of the observations showed that on-task behaviour increased in LGS due to less side talk. It was observed that there was less distraction and students were better able to focus on the lesson in this arrangement. Awareness of their learning styles contributed to students' self-awareness and changed their role from passive to active learners. The following observation notes underline this point:

"After sharing the results of the questionnaire related to learning styles with the students, they got curious about their own learning styles in foreign language learning. Thus, they were informed briefly about learning strategies they could use while studying."
(observation notes, action plan 2)

Learners were assigned group activities according to their learning styles and were therefore more actively involved during the lesson (see Picture 6.6). For example, kinesthetic learners role-played and tactile learners prepared flashcards. Individual learners worked on the activities individually, while group learners worked on the activities collaboratively. The students were assigned projects related to the topic corresponding their learning styles. Even learners who had not actively participated in class before asked questions and participated

more when they sat in groups based on learning styles. In summary, sitting in groups based on students' learning styles is the most effective.

Picture 6.6 Cluster seating according to learner groups (LGS)

6.13. The impact of students' responses to the questionnaire on cluster seating (LGS) on test scores

Table 6.9 shows the results of ANOVA-type statistics used to investigate the interaction between groups related to students' responses to the third teacher-developed questionnaire and their exam scores.

Table 6.9 Non- parametric mixed ANOVA results (F1-LD-F1 model) for questionnaire 3

Questions and groups	n	E1		E2		E3		Total		Group		Time		Group*Time	
		RMs	RTE	RMs	RTE	RMs	RTE	RMs	RTE	Fn	p	Fn	p	Fn	p
1. Awareness of predominant learning style : 100%															
2.Having received guidance from school counselor															
Yes	**23**	40.56	0.51	37.25	0.47	49.78	0.63	37.65	0.48	2.63	0.10	1.03	0.32	0.19	0.69
No	**3**	26.90	0.34	35.75	0.45	41.30	0.52	53.67	0.68						
Total	**26**	39.59	0.50	45.08	0.57	52.31	0.66			No significance detected among Rank Means					
3. Predominant learning style															
Kinesthetic	**12**	28.54	0.36	39.63	0.50	45.17	0.57	37.78	0.48	1.69	0.18	3.96	**0.03**	1.37	0.25
Individual	**7**	52.57	0.67	47.36	0.60	50.21	0.64	50.05	0.64						
Group	**4**	39.00	0.49	20.25	0.25	44.38	0.56	34.54	0.44						
Tactile	**3**	17.17	0.21	21.83	0.27	46.17	0.59	28.39	0.36						
Total	**26**	34.32	0.43	32.27	0.41	46.48	0.59			E1=E2<E3					
4. Perception of change in seating arrangement															
Positive	**21**	34.10	0.43	38.12	0.48	49.81	0.63	40.67	0.52	0.69	0.40	0.66	0.45	1.91	0.16
Negative	**5**	40.40	0.51	30.60	0.39	32.70	0.41	34.57	0.44						
Total	**26**	37.25	0.47	34.36	0.43	41.25	0.52			No significance detected among Rank Means					
5. Impact on attitudes towards courses															
Yes	**20**	31.93	0.40	36.25	0.46	48.90	0.62	39.03	0.49	0.05	0.82	0.83	0.39	2.88	0.08

No	**6**	46.58	0.59	38.08	0.48	38.58	0.49	41.08	0.52								
Total	**26**	39.25	0.50	37.17	0.47	43.74	0.55			No significance detected among Rank Means							
6. Impact on participation in English lessons																	
Yes	**18**	32.78	0.41	36.50	0.46	49.89	0.63	39.72	0.50	0.01	0.92	1.66	0.20	2.02	0.15		
No	**8**	41.00	0.52	37.06	0.47	38.94	0.49	39.00	0.49								
Total	**26**	36.89	0.47	36.78	0.47	44.41	0.56			No significance detected among Rank Means							
7. Self-evaluation in terms of participation																	
3	**8**	26.31	0.37	23.56	0.33	34.88	0.50	28.25	0.40								
4	**7**	35.86	0.51	40.86	0.58	44.71	0.64	40.48	0.58	1.23	0.29	3.15	0.05	0.24	0.87		
5	**8**	32.06	0.46	33.44	0.48	45.38	0.65	36.96	0.53								
Total	**23**	31.41	0.45	32.62	0.47	41.65	0.60			No significance detected among Rank Means							
8. Impact on academic achievement																	
Yes	**16**	34.06	0.43	34.66	0.44	54.81	0.70	41.18	0.52	0.34	0.56	2.01	0.15	5.69	**0.01**		
No	**10**	37.30	0.47	39.90	0.51	33.25	0.42	36.82	0.47								
Total	**26**	35.68	0.45	37.28	0.47	44.03	0.56										
Within groups (Pairwise comparisons)																	
Yes(E1) vs Yes(E2): Fn(1)=0.035, p=0.852 – Yes(E1) vs Yes(E3): Fn(1)=12.723, p<0.001 - Yes(E2) vs Yes(E3): Fn(1)=38.684, p<0.001																	
No(E1) vs No(E2): Fn(1)=0.092, p=0.761 - No(E1) vs No(E3): Fn(1)=0.260, p=0.610 - No(E2) vs No(E3): Fn(1)=23.273, p<0.001																	
Between groups Mann–Whitney U (MWU) test																	
E1(Yes) vs E1(No): MWU=75.5, p=0.816 - E2(Yes) vs E3(No): MWU=68.5, p=0.551 - E3(Yes) vs E3(No): MWU=36.0, p=0.02																	
9. Change of deskmates																	
Yes	**10**	34.50	0.44	38.50	0.49	45.10	0.57	39.37	0.50	0.00	0.98	2.94	0.07	0.16	0.80		
No	**16**	35.81	0.45	35.53	0.45	47.41	0.60	39.58	0.50								
Total	**26**	35.16	0.44	37.02	0.47	46.25	0.59			No significance detected among Rank Means							
10. Prefernece for seating arrangement																	
Friend groups	**11**	33.82	0.43	30.95	0.39	40.82	0.52	35.20	0.44	1.21	0.27	2.80	0.07	0.36	0.65		
Learning styles	**15**	36.40	0.46	40.87	0.52	50.70	0.64	42.66	0.54								
Total	**26**	35.11	0.44	35.91	0.45	45.76	0.58			No significance detected among Rank Means							
E1: First exam scores, E2: Second exam scores, E3: Third exam scores, Fn: Anova type statistic, df: degrees of freedom, p: statistical significance																	

The results showed that there was no significant interaction between group and time and test scores (p>.05). However, as the results obtained from the analysis of responses to the 8th question were statistically significant (Fn=5,69; p<0.05),an analysis of simple effects was conducted. The results indicated that there was a stastitically significant difference in students' scores in the third exam regarding "yes" and "no" replying groups (MWU=36.0, p<0.05). That is, students who believed that cluster seating arrangement determined by learning styles had an impact on academic achievement in English courses outperformed students who did not believe that an interaction existed. An increase in mean ranks from MR_1=34.06 to MR_3=54.81 related to scores of the third exam within the group of students affirming an interaction was statistically significant (Yes(E1) vs Yes(E3): Fn(1)=12.723,

$p<0.001$). Mean ranks of students who rejected an interaction, i.e. $MR_1=37.30$ and $MR_3=33.25$, did not indicate a statistically significant difference. Lastly, it should be noted that the number of students rewarding them with 1 or 2 points for engagement in lessons was low and were therefore not included in the analysis.

6.14. Summary of Findings

In summary, the PLSPQ results show that four learning styles were prevalent in this class: Kinesthetic (N=12), Individual (N=7), Group (N=4), and Tactile (N=3). Interviews and observations revealed that completing tasks that matched students' learning styles and reducing side-talk had a positive impact on classroom engagement. Quantitative analyses showed that there was no significant difference in the test scores of students who did not believe there was a correlation. Conversely, students who agreed with an effect of LGS on academic achievement in EFL courses scored higher on the third achievement test. Thus, it can be concluded that the self-awareness of students who affirmed the influence of the learning environment was an indicator of higher performance on the achievement test.

6.15. Analysis of Diary Entries

So far in this chapter, diary entries have been cited whenever needed in Action Plan 1 and Action Plan 2 when presenting the results obtained with the various data collection instruments during the fieldwork.

Apart from these excerpts, an overall analysis of the teacher-researcher diary records is presented in this part. As the teacher-researcher, I kept a diary that included a summary of observations and documentation of conversations with students. In addition, the diary entries provided insight into lesson content. The entries were written on the days of instruction to "*serve as a basis for later reflection*" (Richards, 1991, p.5). The aspects addressed in the diary were consistent with the data from the observations.

Analysis of the diary entries showed that the teacher-researcher concentrated on four aspects: (1) Types of activities, (2) participation (3) classroom interaction and (4) motivation (see Table 6.10).

Table 6.10 Analysis of diary entries

	Traditional Row Arrangement	*Friend Group Clusters*	*Learning Styles Clusters*
Types of activities	Individual work	Group work	Corresponding to learning styles
Participation	Low in back rows	Middle to high	High
Classroom interaction	Teacher-student	Teacher-student Student-Student Side-talking	Teacher-student Student-Student
Motivation	Low in back rows	High	High

In general, the diary entries showed that teaching varied greatly from the beginning to the end of the study. Instruction in the first phase (fieldwork), which used the traditional row arrangement, included activities based primarily on individual work. Students sometimes performed the activities together with their deskmates. In addition, classroom interactions consisted mainly of conversations between the teacher and students. In the traditional row arrangement, students within the action zone actively participated in class and asked questions when they needed help. The back rows were found to be disadvantegeous because of the distance from the teacher and the blackboard.

In the first action plan, the teacher-researcher made frequent notes on group work, highlighting that communication between students increased. As students were able to manage the activities by helping each other, most of them were more enthusiastic in completing the activities, which in turn improved their on-task behaviour. However, not only the teacher-researcher, but also the students complained about side-talking and free riders during the FGS. Problems related to classroom management were frequently noted.

In the second action plan, some students were unhappy that they could no longer sit with their close friends, but they admitted that side conversations and distractions decreased when they sat according to their learning styles. The teacher-researcher recorded that the lessons in which LGS was employed included a variety of activities to address students' individual differences in learning a foreign language. Diary entries indicated that students in the second action plan were more motivated and performed better academically because they engaged in different types of activities that matched their learning styles and because they were more self-aware.

6.16. Summary

In general, the qualitative data analyses revealed that the students' perspectives were consistent with the teacher-researcher's observations. According to the students' and teacher-researcher's reflections, all of the arrangements used in this AR had both advantages and disadvantages. As mentioned earlier, it is advisable to consider the learning objectives and scope of instruction when determining seating arrangements in the language classroom. Quantitative data analyses showed that considering students' learning styles had a positive impact on academic achievement. Specifically, students who agree that there is an interaction between seating arrangements and academic achievement seemed to benefit when the classroom layout was modified according to certain criteria, such as friendship groups or learning styles. In summary, classroom design directly affects students, and if a change in engagement and motivation is expected, it is essential to intervene in the existing learning environment (Philpott, 1993). The next section discusses and interprets the results and findings in more detail.

CHAPTER VII

DISCUSSION AND CONCLUSIONS

7.1. Introduction

This chapter includes a discussion of the two sub-questions that arise from the research question, as well as conclusions drawn from the results of the study. Finally, implications and suggestions for further research are given.

7.2. Discussion

The purpose of this study was to shed light on what impact AR might have on students' perceptions of different seating arrangements and their academic performance in the context of EFL. The purpose of this study was to change seating arrangements to promote a supportive learning environment in ELT. The following research question which is divided into one qualitative and one quantitative sub-question guided this AR:

- Does AR have an effect on EFL students' perceptions of different seating arrangements and their academic achievements?
- What are students' perceptions of different seating arrangements in English courses?
  Regarding 1. traditionalrow seating
  2. cluster seating according to friend groups
  3. cluster seating according to learning styles
- Do different seating arrangements affect students' academic achievement?

Qualitative and quantitative data were collected during the fieldwork and action plans of the study. The conclusions drawn from the results were discussed based on the research questions, which are presented below.

7.2.1. Discussion of the first research sub-question

➢ What are students' perceptions of different seating arrangements in English courses?

To address the first sub-question, students' perceptions of the seating arrangements were explored through questionnaires and semi-structured interviews. Data collected from participants were triangulated with observational data and diary entries from the teacher. Results indicated that the traditional row arrangement did not promote social learning in English classes. The classes were teacher-centered and student-student interaction rarely occurred in the traditional row arrangement. Research suggests that seating has an impact on

academic performance because students who sit in the front rows are more likely to participate in class and achieve better grades (Benedict & Hoag, 2004; Shernoff et al., 2017). Similarly, observations in the present study revealed that students who sat in the back rows seemed isolated from class interaction. The students liked the traditional row arrangement, especially in terms of being able to sit across from the teacher and listen well. As disadvantages of the traditional row arrangement, the students mentioned the lack of opportunity for group work, the distraction caused by the chatter in the back rows, and the distance to the teacher and the blackboard in back rows. Despite these disadvantages, the results of the questionnaire on traditional row seating showed that the majority of students were satisfied with it. The reason for this discrepancy can be seen in the fact that students may not want to leave their "comfort zone" (Maag, 2009). The questionnaire also indicated that most students had no experience with other seating arrangements, which could be another reason.

In the first action plan, students sat in groups with their friends, and the change in classroom layout was overwhelmingly viewed as positive by students. According to sociocultural theory, collaboration can enhance learning and motivation (Sainsbury & Walker, 2009). In fact, collaborative learning contributes to the development of personal and social skills (Alfonseca et al., 2006). Because friendship is associated with more effective collaboration and higher motivation (Sainsbury & Walker, 2009), this AR investigated students' perceptions of FGS. The general opinion was that sitting together with friends, due to group work, has a beneficial effect on participation in English classes. Because the teacher played the role of a facilitator, the students were more actively involved in the activities due to the positive class atmosphere. However, the chatter among friends, the lack of overview of the board, and the unequal participation in the activities were unfavourable sides of this arrangement.

Students were grouped according to their learning styles in the second action plan. The members of the groups changed by 70 percent in the change from FGS to LGS. To elicit students' learning styles the PLSPQ constructed by Reid (1987) was used as it was supposed to match with the scope of the study. Interestingly, the most common predominant learning style of the students in this class were not in line with the rates that are usually reported in educational sciences books. Although it is assumed that students are mostly visual learners, most of the students in this study were kinesthetic learners. The students appreciated being aware of their learning styles and completing appropriate tasks. Furthermore, they indicated that knowing how they learn best increased their motivation. On the other hand, they were not

happy to be separated from their friends. Previous studies suggest that considering learning styles may be an effective way to group learning (Kuo et al., 2015; Pasina et al. 2019; Wang et al., 2007). In view of its importance for foreign language learning (Ehrmann et al., 2003), the next action plan involved clustering by learning styles. "Learning to learn" as a metacognitive strategy contributes to learners' self-awareness and has a positive impact on foreign language learning (Nunes, 2018). Also, the data obtained through the questionnare about LGS and interviews showed that self-awareness increased students' motivation and on-task behaviour in EFL courses. In addition, students appreciated being given tasks that matched their learning styles, which significantly reduced free-riding and side-talking. In summary, educational resources that are aligned with students' learning styles and the acquisition of knowledge while engaging in activities in collaboration with classmates contribute to student learning (Alfonseca et al., 2006).

7.2.2. Discussion of the second research sub-question

➢Do different seating arrangements affect students' academic achievement?

To answer the second sub-question, whether different seating arrangements affect students' academic performance, quantitative data were collected through school exams that were part of the assessment within formal EFL instruction. Student scores from three achievement tests administered at the end of the fieldwork and action plans were analysed in light of their responses to the questionnaires.

In general, students' scores in the first achievement test were lower than in the second and third test. Yet, the results quantitative data obtained through the first questionnaire exploring students' perspectives on the traditional row arrangement showed that students who were of the opinion that seat location and seating arrangement had an impact on academic achievement had higher grades in the first achievement test than those students' who did not believe in interaction. Further analysis of the initial questionnaire and the students' grades by the teacher-researcher revealed that students who sat in the front and middle rows in the traditional seating arrangement believed in interaction and had better grades. As with previous studies, it can be concluded that higher performing students generally prefer to sit in the front rows (Will et al., 2020) and that students choose their seats based on their desire for engagement and learning (McCroskey et al., 1978; Shernoff et al., 2017). In short, students who believe that seating arrangements affect academic performance tend to choose seats in the front rows, which in turn positively affects their academic performance.

In FGS students were less dependent on the teacher (Xi et al., 2017) and student interaction increased when seating arrangements were determined by friend groups. However, the data analyses showed that this arrangement was not beneficial for all students. For example, the results of the second achievement test showed that a significant number of students received lower scores than in the first achievement test. Specifically, the results of students who rejected an interaction between sitting in friend groups and academic performance showed a statistically significant decline. These students felt that the seating arrangement and academic performance were unrelated. An important aspect highlighted by two students during the interviews needs to be mentioned here. In their opinion, although the traditional row arrangement did not promote collaboration among students, it was beneficial for individual work. They emphasised that sitting with close friends made the classroom atmosphere friendlier, but resulted in lower academic achievement. Similarly, Simmons et al. (2015) found that compared to the traditional row arrangement and the horseshoe arrangement, group seating caısed the most conversations. Previous studies indicated that using a student-centered approach to seating arrangements through the use of clusters does not always lead to higher academic achievement (Byers et al., 2018; Tobia et al., 2020). Moreover, it would actually be better if close friends did not sit together. Instead, it was found to be more effective to adjust the seating arrangement to the scope of the tasks and the characteristics of the students.

The criteria considered for clustering in the subsequent action plan were learning styles. The groups, which consisted of students with the same learning preferences, were often assigned activities that matched their learning styles. Previous studies indicated that the more teachers accommodate diverse instructional approaches, the better they are able to meet students' needs, which in turn improves classroom learning (Fleming, 1995). FGS was changed after identifying students' learning styles and the change in groups was calculated as 70 percent. When group members changed, side-talk decreased, and self-awareness positively affected student motivation. In addition, results showed that there was a significant difference between groups on the final academic achievement test. Students who believed that LGS had an impact on academic achievement in English courses outperformed students who did not believe in an interaction. In summary, data analyses revealed that students who believed that seating arrangements and academic performance were related performed significantly better than students who held the opposite view. Although all students appreciated knowing their predominant learning styles, the question remains whether they used this information to change their learning strategies in other subjects.

7.3. Summary

By answering the two sub-questions, the study's research question of whether AR has an impact on students' perceptions of different seating arrangements from EFL and their academic performance could be answered. Action plans were created by focusing on students' needs and thoughts, and necessary changes were made to find the most effective method or technique related to the identified problem, i.e., traditional row seating in EFL classrooms. As mentioned earlier, most of the students had no experience with different types of seating, and they believed that traditional row seating was appropriate for EFL learning. Through the implementation of the classroom design action plans, students became aware of the positive and negative effects of different seating arrangements on learning. AR had an impact on student perceptions in that the majority of students had a positive opinion of the change in seating arrangements. In addition, interview and observational data indicated that conducting this AR study increased students' self-awareness by focusing on learning styles in the final stage. Test scores indicated that this study impacted academic achievement in English courses, which were generally the lowest prior to the implementation of the action plans. Specifically, students who believed that seating arrangements and academic performance were interrelated performed better than students who did not believe there was an interaction. It can be inferred that AR raised students' awareness of the learning environment and their learning methods. In summary, teachers need to adopt a reflective teaching approach to improve their own practice if they expect students to get the most benefit from the classroom.

7.4. Conclusions

The purpose of this study was to examine the effects of conducting AR to solve practical problems in the EFL context, focusing on seating arrangements. This AR provided evidence that reflection is a prerequisite for change (Leitch & Day, 2000). The teacher-researcher reflected in and on practice, identified the problem, and looked for ways to improve. This AR was empirical in that action plans were created to find the most effective method or technique related to the identified problem. The data obtained during the study showed that most students appreciated the action plans because these plans were based on their thoughts and feelings. Since this AR was based on collaboration and all participants were given voice during the study, it can also be defined as practical (or participant) AR. Furthermore, the study explicitly describes which part of the study is teaching and which part is research.

Traditionally, teachers prioritize academic considerations when designing the classroom (Gremmen et al., 2016). Conversely, previous studies have shown that, in addition to considering learning objectives, seating arrangements that promote classroom interaction and social learning are preferable for classroom learning (Douglas & Gifford, 2001; Simmons et al., 2015; Xi et al., 2017). Similarly, the results of the present study suggest that using seating arrangement as an effective tool and changing the action zone in the classroom can promote student engagement and participation during EFL courses. Despite its advantages for individual work, the traditional row arrangement has been criticized mainly for its emphasis on the action zone. In fact, the quantity but not the quality of student work increases when students are seated in rows and columns (Bennett & Blundell, 1983).

In general, group seating increased student motivation and social interactions in English classes. Nevertheless, free-riding and side-talking negatively affected academic performance when groups were arranged by friend groups. These problems decreased when groups were arranged by learning styles in the second action plan. One reason that side-talking decreased in the LGS could be that students were more engaged in activities that matched their learning styles. Another reason could be that the members of the groups changed by 70 percent. This rate also shows that the majority of close friends in this class had different learning styles. The goal of this action plan was to address students' English learning preferences, and the groups were therefore formed according to learning styles. Addressing students' individual differences and increasing self-awareness resulted in higher achievement gains, especially for students who agreed with the effects of seating arrangements on academic performance. As noted earlier, the most prevalent learning styles of the students in this class differed from those typically reported in educational science books. Even though students are reported to be primarily visual learners, most students in this study were kinesthetic learners. This discrepancy shows that each educational setting is different and that one must be cautious in making and accepting generalisations regarding individual differences.

Indeed, students may exhibit different characteristics in different contexts. Therefore, rather than relying on existing knowledge about learning and teaching, teachers should critically reflect on their practice to effectively address students' needs and improve their learning. In conclusion, EFL teachers can use the AR method as "*[...] a resolution to the theory-practice issue"* (Elliott, 1991, p.53) to improve practice while addressing students' needs and interests related to the learning objectives.

7.5. Limitations of the Study

There are limitations of this study that should be considered when interpreting the results. The first limitation of the present study is that previous research has been limited in scope (ELT). Consequently, the number of these studies was not sufficient to draw a general conclusion.

The second limitation relates to the sample size, which was limited to a class of 26 female students. Although collecting repeated measures in a longitudinal study may increase statistical power for examining differences (Guo & Pandis, 2015), a higher number of students may influence the results and findings. It should also be considered that the study was conducted with Turkish students whose cultural and educational experiences may have influenced their perceptions of the new classroom layout. They may have certain perceptions about seating arrangements that could have affected their approach to implementation and test results. Consequently, caution should be exercised when attempting to make generalizations for students from different educational backgrounds in different contexts.

The third limitation of the study was that the different seating arrangements were applied only in English courses. Due to academic considerations, which instructors usually prioritize, it was not possible to introduce a different seating arrangement in other courses. Therefore, the seating arrangements studied were only used for a limited time each week. As a result, the amount of time for each seating arrangement may not have been sufficient. In addition, the study was unable to control for other essential components of the classroom environment, such as lighting, temperature, or classroom size, which may have impacted student learning.

7.6. Implications

First, the results of this study could be used by language teachers who face problems related to classroom design during English language instruction. Indeed, it is important to create a learning environment that supports the acquisition of communicative skills through social interactions (Wang, 2006; Yang et al, 2021) by adopting a sociocultural perspective (Sun & Zhang, 2021). Designing the classroom according to the type of activities in the language classroom, which are mostly based on cooperation, and considering individual differences in the arrangement of seats (Hoekstra et al., 2023) can help language teachers create a supportive learning environment for EFL. If teachers want to bring about a positive change in the classroom atmosphere, they can consider intervening in the design of the classroom.

Second, this AR was conducted in the context of EFL, but teachers of other subjects can experiment with different seating arrangements in their classes when conducting different

activities. They can investigate what type of seating arrangement best suits the topic being taught until they come to a solution in order to apply it in future lessons.

Third, a reflective teaching approach and employing AR can help EFL teachers solve practical problems in their classes. It should be remembered that AR is based on collaboration among stakeholders, which can promote learner autonomy by taking responsibility for their own learning. Students will be motivated and learning will occur over time as students take control of their learning (Dickinson, 1995; Williams & Burden, 1997). Finally, teachers should consider reflective thinking as a fundamental part of teaching because they can reconstruct their pedagogical theories by trying out new forms of action that contribute to their professional development (Elliot, 1994). In short, by becoming reflective practitioners, they can control their own practice.

Finally, teaching in Turkey is based on the constructivist approach, and teachers are expected to address students' individual differences when teaching. To achieve this goal, teachers should first identify students' learning styles. It should also be pointed out that the learning environment plays a crucial role in learning. Therefore, it should be questioned whether the traditional row arrangement in classrooms is compatible with these ideas. Due to the shift from a teacher-centered to a student-centered approach, cluster seating may be considered relevant to the new learning goals (Norazman et al., 2019). Suggestions for aligning seating arrangements with learning objectives can be incorporated into formal instruction regulation on primary and secondary schools.

7.7. Further Research

Considering the above limitations, there are some suggestions for further research. First of all, the seating arrangement was manipulated due to the limited time in the weekly schedule for a certain period of time. If the time can be extended, other types of seating arrangements, such as the U seating arrangement, can be used to collect more appropriate data. When modifying seating arrangements, future researchers should consider factors such as classroom size and number of students. The scope of activities and learning objectives should also be considered. For example, the U-shaped arrangement is not appropriate for group work or the row and column arrangement is not appropriate for discussions.

Second, to increase the effectiveness of the data and obtain more statistically meaningful results, further research could include a larger sample or samples including male students. In addition, studies with other student populations are needed to determine if the reported results

are representative of other populations in the context of EFL. In other words, future researchers could conduct an AR study of seating arrangements with students of different ages or English proficiency levels.

Third, it would also be advisable to include other school subjects so that colleagues' views on implementation can be considered when drawing conclusions. In summary, future researchers can provide further evidence on the use of strategies in accordance with students' learning styles if they can extend the time for studies with seating arrangements determined by learning styles.

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APPENDIX A: Questionnaire on Traditional Row Arrangement

Değerli öğrenciler;

Aşağıda yer alan anket derslerinizde uygulanan oturma düzenleri ile ilgilidir. Verdiğiniz bilgiler oturma düzeninin öğretime etkilerini araştırmaya yönelik yürütülen bir araştırma için kullanılacak ve saklı tutulacaktır. Soruları cevaplamada göstereceğiniz gayret ve samimiyet için şimdiden teşekkür ederim.

Kişisel Bilgiler:

Adınız ve Soyadınız: _____

Yaşınız: _____

Uyruğunuz: TC ☐ Diğer ☐

Ailenizin mesleği: _____

Yaşadığınız yer: Köy ☐ İlçe Merkezi ☐ İl Merkezi ☐

Oturma düzenleri ile ilgili bilgiler:

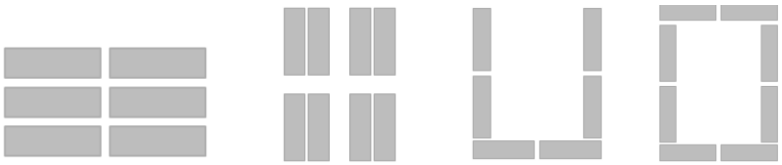
1. Başka öğrencilerle aynı sırayı paylaşmaktan memnun musunuz? Evet ☐ Hayır ☐

2. Başka öğrencilerle aynı sırada oturmak dikkatinizi dağıtıyor mu? Evet ☐ Hayır ☐

3. Sıra arkadaşınızı kendiniz mi seçtiniz? Evet ☐ Hayır ☐

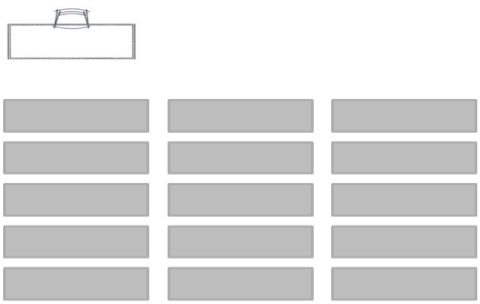
4. Derslerinizde şimdiye kadar farklı oturma düzenleri uygulandı mı? Evet ☐ Hayır ☐

5. Derslerinizde şimdiye kadar aşağıdaki oturma düzenlerinden hangisi/hangileri uygulandı?



☐ ☐ ☐ ☐

6. Klasik oturma düzeninde nerede oturmayı tercih edersiniz? Lütfen işaretleyiniz.



7. Klasik oturma düzeni İngilizce dersine katılımınızı ne şekilde etkilemektedir?

Olumlu ☐ Olumsuz ☐

8. İngilizce dersine katılımınızı 1 ile 5 puan aralığında değerlendiriniz ve işaretleyiniz lütfen.

1 (az)	2	3	4	5 (çok)

9. İngilizce dersinde klasik oturma düzeni ile ilgili görüşleriniz hangi yöndedir?

Olumlu ☐ Olumsuz ☐

10. İngilizce dersinde klasik oturma düzeninin hangi yönlerini olumlu bulduğunuzu yazınız lütfen.

11. İngilizce dersinde klasik oturma düzeninin hangi yönlerini olumsuz bulduğunuzu yazınız lütfen.

APPENDIX B: Questionnaire on Cluster Seating according to Friend Groups

Arkadaş Grubuna Göre Oturma Anketi

Değerli öğrenciler;

Aşağıda yer alan anket derslerinizde uygulanan oturma düzenleri ile ilgilidir. Verdiğiniz bilgiler oturma düzeninin öğretime etkilerini araştırmaya yönelik yürütülen bir araştırma için kullanılacak ve saklı tutulacaktır. Soruları cevaplamada göstereceğiniz gayret ve samimiyet için şimdiden teşekkür ederim.

1. Oturma düzeninde yapılan değişiklik hakkındaki görüşünüz hangi yöndedir?

Olumlu ☐ Olumsuz ☐

2. Arkadaş grubunuzla oturmak dersteki *memnuniyeti*nizi ne şekilde etkiledi?

Olumlu ☐ Olumsuz ☐

3. Arkadaş grubunuzla oturmak İngilizce dersine*katılımınızı* artırdı mı?

Evet ☐ Hayır ☐

Cevabınız *Evet* ise örnekler veriniz.

4. İngilizce dersine katılımınızı 1 ile 5 puan aralığında değerlendiriniz ve işaretleyiniz lütfen.

1 (az)	2	3	4	5 (çok)

5. Arkadaş grubunuzla oturmak İngilizce dersinde *başarınızı*/*notunuzu* artırdı mı?

Evet ☐ Hayır ☐

Cevabınız Evet ise sınav notlarınız nedir?

6. Aşağıdaki 1. Şekil klasik oturma düzeni 2. şekil ise arkadaş grubu oturma düzenini göstermektedir.

1. 2.

Arkadaş grubu oturma düzeni sizce hangi düzeyde uygulanmalı?

☐ Sadece İngilizce dersinde uygulanmalı. ☐ Bütün derslerde uygulanmalı.

8. Arkadaş grubuna göre oturma düzeninin *olumlu* yönlerini yazınız lütfen.

9. Arkadaş grubuna göre oturma düzeninin *olumsuz* yönlerini yazınız lütfen.

APPENDIX C: Questionnaire on Cluster Seating according to Learning Styles

Öğrenme Yöntemine Göre Oturma Anketi

Değerli öğrenciler;

Aşağıda yer alan anket derslerinizde uygulanan oturma düzenleri ile ilgilidir. Verdiğiniz bilgiler oturma düzeninin öğretime etkilerini araştırmaya yönelik yürütülen bir araştırma için kullanılacak ve saklı tutulacaktır. Soruları cevaplamada göstereceğiniz samimiyet için şimdiden teşekkür ederim.

1. Baskın/etkin olan öğrenme yönteminizi biliyor musunuz?

   Evet ☐ Hayır ☐

2. Öğrenme yönteminiz danışman veya rehber öğretmen tarafından incelendi mi?
   Evet ☐ Hayır ☐
3. Sizce etkili öğrenme yönteminiz aşağıdakilerden hangisidir? Yani, nasıl ders çalışıyorsunuz?*[Araştırmacı seçenekler hakkında kısa açıklayıcı bilgi verir]*

Görsel Öğrenme ☐ İşitsel Öğrenme ☐ Bedensel/somut öğrm☐

Tek başıma öğr. ☐ Grupla öğrenme ☐ Yaparak/deneyerek ☐

4. Oturma düzeninde yapılan değişiklik hakkındaki görüşünüz hangi yöndedir?

   Olumlu ☐ Olumsuz ☐

5. *Öğrenme yönteminize* göregruplandırılarak oturmak dersteki *memnuniyetinizi*artırdı mı?

   Evet ☐ Hayır ☐

6. Öğrenme yöntemine göre gruplandırılarak oturmak İngilizce dersine *katılımınızı* artırdı mı?

   Evet ☐ Hayır ☐

7. İngilizce dersine katılımınızı 1 ile 5 puan aralığında değerlendiriniz ve işaretleyiniz lütfen.

1 (az)	2	3	4	5 (çok)

8. Öğrenme yönteminize göre gruplandırılarak oturmak İngilizce dersine yönelik *başarınızı/notunuzu* artırdı mı?

   Evet☐ Hayır ☐ Cevabınız Evet ise sınav notunuz nedir?

9. Arkadaş grubundaki kişiler ile öğrenme yöntemi grubundaki kişiler aynı mı?
   Evet ☐ Hayır ☐

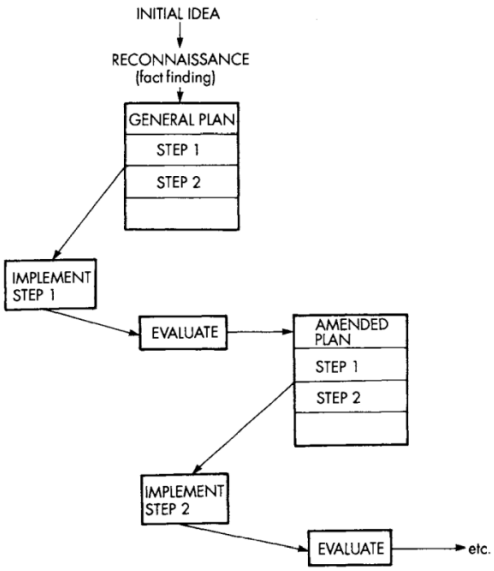
10. En fazla hangi grup türünde oturmayı tercih edersin. Lütfen seçiniz.

    ☐Arkadaş grubu ☐Öğrenme yöntemi grubu Nedenini kısaca yazınız.

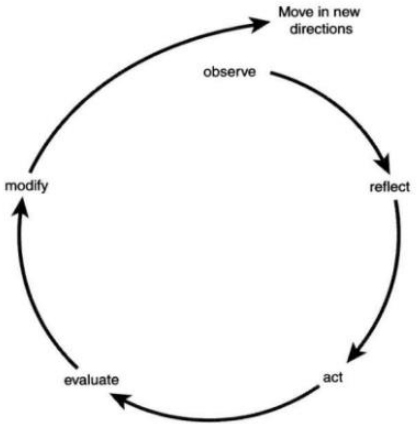
11. Öğrenme yöntemi sizin öğrenme yöntemine benzer ama beraber oturmayı tercih etmeyeceğiniz kişi olursa ne yaparsınız. Lütfen yazınız.

12. Öğrenme yöntemine göre gruplandırılarak oturma düzeni hakkında eleştiriniz var mı? Lütfen yazınız.

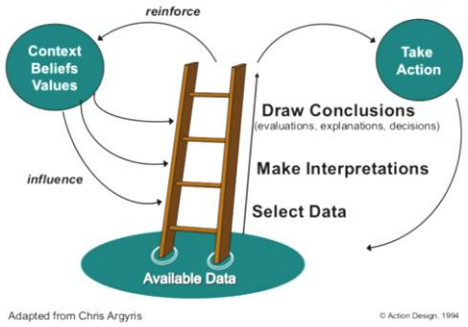
APPENDIX D: Figures related to Action Research



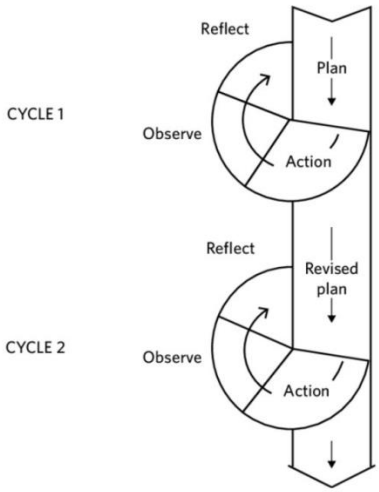
'Lewin's AR cycle', Kemmis (1980)
(as cited in Williams et al., 2019)



McNiff &Whitehead, 2009

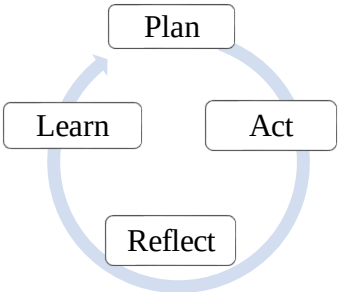


Ladder of Inference (McArthur, 2014)



Kemmis and McTaggart Model

(1988 p. 11-14, cited in Burns, 2010)



Action Cycle of AL

APPENDIX E: Summary of Reviewed Studies

Studies	*Focus*	*Design*	*Context*	*Results*
McCroskey, 1978	Students' perceptions of seating arrangements	Quantitative	University (US)	Positive attitudes towards traditional row and horseshoe arrangement
Philpott, 1993	Seating plans in EFL classes	Action research	EFL school (Spain)	Student engagement increased due to intervention in seating arrangement
Douglas &Gifford, 2001	Professors' and students' perceptions of seating arrangements	Quantitative	University (Canada)	Positive attitudes towards U-shaped and cluster arrangement
Benedict &Hoag, 2004	Relationship between seat location and academic achievement	Quantitative	University (US)	Higher grades in front rows
Karaman, 2009	seating arrangement in large halls	Evaluation research	Turkey	Fan-shaped seating was found beneficial in terms of visual and acoustical conditions
Çınar, 2010	Preference for seat location in traditional classrooms	Survey	University (Turkey)	Students in front rows were more willing to participate in courses
Yıldırım et al., 2011	Students' perceptions of two differently designed computer classrooms	Qualitative	University (Turkey)	Students preferred the classroom in which the tables were grouped
Meeks et al., 2013	Relationship between seat location and academic achievement	Quantitative	University (US)	Not seat location but gender was an indicator of academic achievement
Hilal, 2014	Straight row arrangement and U-shaped arrangement in higher education	Case study	University (Turkey)	Straight rows are beneficial for concentration; U-shaped arrangement promotes participation
Simmons et al., 2015	On-task/off-task behaviour in different seating arrangements	Qualitative	Primary school (US)	Seating arrangements had different benefits; positive attitudes towards cluster arrangement
Gremmen et al., 2016	Teachers' considerations when arranging seats	Mixed-methods	Elementary school (Netherlands)	Teachers arranged seats according to academic and social considerations, physical features and students' characteristics
Kinahan, 2017	Teachers' perceptions of seating arrangements	Qualitative	Elementary school (US)	Teachers prioritized students' needs and preferences and changes in curriculum when arranging seats
Xi et al., 2017	Relationship between students' preferences for seating arrangements and academic achievement	Quantitative	University (China)	Positive attitudes towards cluster seating arrangement; higher grades in middle rows
Zhang, 2018	Teachers' and students'perceptions of seating arrangements	Ethnography	High-school Secondary-school (China)	Seats were distributed according to academic performance

Kılıç, 2019	Ergonomic arrangements regarding school furniture and working equipment in workshops	Case study	Vocational high school (Turkey)	Equipment which could be adjusted to students' physical characteristics should be used
Tobia et al., 2020	Relationship between seating arrangements and cognitive processes	Quasi-experimental	Primary school (Italy)	Positive attitudes towards single desks
Yıldız, 2020	Teachers' perceptions of learning environment in ELT	Case study	High school (Turkey)	Fixed seating arrangement limited teaching methods
Salma, 2020	Stakeholders' perceptions of seating arrangements	Case study	Middle school (Turkey)	Negative attitudes towards traditional row arrangement
Nurfaidah et al., 2021	The use of seating arrangements for different purposes	Case study	English Education Department (Indonesia)	Seating arrangement should be used according to teaching and learning objectives
Utku et al., 2021	Ergonomic aspects of classroom designs	Quantitative Experimental	University (Turkey)	Students did not prefer tablet-armed chairs
Tafahomi, 2021	Seating arrangement in architecture studios	Mıxed-methods	University (Rwanda)	U-shaped arrangement were useful in studios
Yang, 2021	Seating arrangement in EFL blened classrooms	Mixed-methods	University (China)	Students preferred semicircular arrangement
Kuru & Tosun, 2022	Multigrade teachers' views on effective EFL learning environments	Qualitative Descriptive	Primary school (Turkey)	Teachers preferred to group students by age

APPENDIX F: Permisson to conduct the study

T.C.
ORDU VALİLİĞİ
İl Millî Eğitim Müdürlüğü

Sayı : E-18802389-605.01-46982588 01.04.2022
Konu : Araştırma İzni
(Pembe TÖNGEL)

VALİLİK MAKAMINA

İlgi :a) Milli Eğitim Bakanlığı Yenilik ve Eğitim Teknolojileri Genel Müdürlüğünün 21.01.2020 tarihli ve 1563890 sayılı yazısı (Genelge 2020/2)
b) Ordu Üniversitesi Rekörlüğü Sosyal Bilimler Enstitüsü Müdürlüğünün 25.03.2022 tarihli ve 710634 sayılı yazısı.

Ordu Üniversitesi Sosyal Bilimler Enstitüsü Müdürlüğü İngiliz Dili ve Edebiyatı Anabilim Dalı Tezli Yüksek Lisans Programı öğrencisi Pembe TÖNGEL'in "Eylem Araştırması Yönteminin Öğrencilerin Farklı Oturma Düzenleri ve Akademik Başarılarına Etkileri" konulu bilimsel çalışmasına veri sağlamak amacıyla anket çalışması yapma izin talebine ilişkin ilgi (b) yazı ve ekleri, Müdürlüğümüz Araştırma Değerlendirme Komisyonu tarafından ilgi (a) genelge hükümleri doğrultusunda incelenmiş olup, uygulanmasında sakınca görülmemiştir.

Söz konusu anket çalışmasının, pandemi koşulları göz önünde bulundurularak eğitim öğretim faaliyetlerini aksatmayacak şekilde olur ekinde yer alan imzalı ve mühürlü formun kullanılarak, öğrencilere ait çalışmaların veli izni doğrultusunda ve elde edilen verilerin herhangi bir haber, resmi özel web sayfaları, yerel ve ulusal basında paylaşılmaması kaydıyla, Ordu Üniversitesi Sosyal Bilimler Enstitüsü Müdürlüğü İngiliz Dili ve Edebiyatı Anabilim Dalı Tezli Yüksek Lisans Programı öğrencisi Pembe TÖNGEL tarafından; İlimiz resmi İmam-Hatip Anadolu Lisesinde 2021-2022 eğitim ve öğretim yılı içinde okul ve kurum müdürlüğünün sorumluluğunda gönüllülük esasına göre uygulanması Müdürlüğümüzce uygun görülmektedir.

Makamlarınızca da uygun görülmesi halinde Olur 'larınıza arz ederim.

Yusuf ACAR
Müdür a.
Şube Müdürü

OLUR
Mehmet Fatih VARGELOĞLU
Vali a.
İl Millî Eğitim Müdürü

Ek :
1-Komisyon Kontrol Tutanağı (2 Sayfa)
2-Anket Formu ve Ekleri (8 Sayfa)

Bu belge güvenli elektronik imza ile imzalanmıştır.
Adres : Karşıyaka Mah. Atatürk Bulvarı No:336/B Altınordu/ORDU
Dahili :
Telefon No : 0 (452) 223 16 29
E-Posta: arge52@meb.gov.tr
Kep Adresi : meb@hs01.kep.tr
Belge Doğrulama Adresi : https://www.turkiye.gov.tr/meb-ebys
Bilgi için: Mustafa KURUL VHKİ (Strateji Geliştirme Şub.Müd.)
Unvan : Veri Hazırlama ve Kontrol İşletmeni
İnternet Adresi: ordu.meb.gov.tr Faks:4522250144

APPENDIX G: Ethics Committee Approval

T.C.
ORDU ÜNİVERSİTESİ
SOSYAL BİLİMLER ENSTİTÜSÜ
YÖNETİM KURULU KARARLARI

Toplantı Sayısı	Karar Sayısı	Karar Tarihi
10	2022/232-273	09.03.2022

KARAR NO: 2022/265

İngiliz Dili ve Edebiyatı Anabilim Dalı tezli yüksek lisans programında kayıtlı aşağıda ismi geçen öğrencinin, tez konusunun belirlenmesi ile ilgili anabilim dalının akademik kurul kararının yer aldığı 14.02.2022 tarihli ve 694828 sayılı yazısı görüşüldü.

Yapılan görüşme sonucunda; ilgili öğrencinin tez konusunun anabilim dalından teklif edilen tarihi itibariyle ve aşağıda gösterildiği şekliyle belirlenmesine, toplantıya katılanların oy birliği ile karar verildi.

Öğrencinin Adı-Soyadı	Tez Danışmanı	Önerilen Tezin Konusu
Pempe TÖNGEL 20531400024	Dr. Öğr. Üyesi Ercan TOMAKİN	Eylem Araştırması Yönteminin Öğrencilerin Farklı Oturma Düzenleri ve Akademik Başarılarına Etkileri

ASLI GİBİDİR
15.03.2022

Neslihan BEYAZ
Enstitü Sekreteri

APPENDIX H: Consent Form

Sayın Veli;
Çocuğunuzun katılacağı bu çalışma, "Eylem araştırması yönteminin öğrencilerin farklı oturma düzenleri ve akademik başarılarına etkileri" adıyla, 02.05.2022 – 27.11.2022 tarihleri arasında yapılacak bir araştırma uygulamasıdır.

Araştırmanın Hedefi: Bu çalışmanın amacı, eylem araştırması yönteminin lise öğrencilerin sınıfta, klasik oturma, arkadaş grubuna göre oturma ve öğrenme yöntemlerine göre oturma düzenlerine ve akademik başarılarına etkilerini incelemektir.

Araştırma Uygulaması: Anket / Görüşme / Gözlem / Sınav şeklindedir.

Araştırma T.C. Milli Eğitim Bakanlığı'nın ve okul yönetiminin de izni ile gerçekleşmektedir. Araştırma uygulamasına katılım tamamıyla gönüllülük esasına dayalı olmaktadır. Çocuğunuz çalışmaya katılıp katılmamakta özgürdür. Araştırma çocuğunuz için herhangi bir istenmeyen etki ya da risk taşımamaktadır. Çocuğunuzun katılımı **tamamen sizin isteğinize bağlıdır**, reddedebilir ya da herhangi bir aşamasında ayrılabilirsiniz. Araştırmaya katılmamama veya araştırmadan ayrılma durumunda öğrencilerin akademik başarıları, okul ve öğretmenleriyle olan ilişkileri etkilemeyecektir.

Çalışmada öğrencilerden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplar tamamıyla gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir.

Uygulamalar, genel olarak kişisel rahatsızlık verecek sorular ve durumlar içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden çocuğunuz kendisini rahatsız hissederse cevaplama işini yarıda bırakıp çıkmakta özgürdür. Bu durumda rahatsızlığın giderilmesi için gereken yardım sağlanacaktır. Çocuğunuz çalışmaya katıldıktan sonra istediği an vazgeçebilir. Böyle bir durumda veri toplama aracını uygulayan kişiye, çalışmayı tamamlamayacağını söylemesi yeterli olacaktır. Anket çalışmasına katılmamak ya da katıldıktan sonra vazgeçmek çocuğunuza hiçbir sorumluluk getirmeyecektir.

Onay vermeden önce sormak istediğiniz herhangi bir konu varsa sormaktan çekinmeyiniz. Çalışma bittikten sonra bizlere telefon veya e-posta ile ulaşarak soru sorabilir, sonuçlar hakkında bilgi isteyebilirsiniz. Saygılarımızla,

Araştırmacı : Pempe TÖNGEL

İletişim bilgileri : 05*********

Velisi bulunduğum ..... sınıfı ..... numaralı öğrencisi ..... ……'in yukarıda açıklanan araştırmaya katılmasına izin veriyorum.
(Lütfen formu imzaladıktan sonra çocuğunuzla okula geri gönderiniz*).

..../...../.....

İsim-Soyisim İmza:

Veli Adı-Soyadı :

APPENDIX I: Permission to use the PLSPQ (Translation)

İzin talebi

PT Pembe TÖNGEL

Sayın Dr. Ercan Tomakin Hocam,

Danışmanlığını yaptığınız yüksek lisans tezim için yapacağım çalışmada eğer uygun görürseniz tarafınızca Türkçe'ye çevirilen İngilizce Öğrenme Yöntemini Belirleme Anketini kullanmak istiyorum. Katkılarınız için şimdiden teşekkür ederim.

Saygılarımla,
Pempe Töngel

Re: İzin talebi

Yanıta şununla başla: Teşekkür ederim. | Anladım, teşekkürler! | Çok teşekkür ederim!

İlgili Makama,
Danışmamlığını yaptığım Ordu Ünv. Sosyal Bil. Enstitüsüne 20531400024 nolu ile kayıtlı Pempe TÖNGEL, tarafımdan Türkçe'ye çevrilen anketi kendi çalışmasında kullanabilir, tarafımdan izin verilmiştir.

Bilgilerinize
Dr. Öğr. Üyesi Ercan TOMAKİN
Ordu Ünv. Fen Edebiyat Fakültesi
Yabancı Diller Blm ORDu

APPENDIX J: The Perceptual Learning Style Preference Questionnaire (Translation)

Değerli Öğrenci;

Bu ölçek, öğrencilerin İngilizce öğrenme yöntemini belirlemek amacıyla geliştirilmiştir ve bilimsel bir çalışma için kullanılacaktır. Ölçekte bulunan maddeleri dikkatlice okuduktan sonra, sağ tarafta bulunan seçeneklerden sizin için en uygun olan bir tanesini (X) ile işaretlemeniz istenmektedir. Yanıtlarınız kesinlikle GİZLİ tutulacaktır. Lütfen hiçbir maddeyi boş bırakmayınız. Katılımınız için şimdiden teşekkür ederim.

Sıra No	Aşağıdaki maddeleri **İngilizce** öğrenmeniz açısından değerlendiriniz.	**Tamamen** Katılıyorum	**Kısmen** Katılıyorum	**Kararsızım**	**Kısmen** Katılmıyoru	**Hiç** Katılmıyoru
1	Dersin hocası yapacağım şeyleri söylerse daha iyi anlarım.	[ ]	[ ]	[ ]	[ ]	[ ]
2	Konuları sınıfta uygulayarak öğrenmeyi tercih ederim.	[ ]	[ ]	[ ]	[ ]	[ ]
3	Başkalarıyla çalıştığımda daha fazla ödev yaparım.	[ ]	[ ]	[ ]	[ ]	[ ]
4	Bir grupla çalıştığımda daha fazla bilgi öğrenirim.	[ ]	[ ]	[ ]	[ ]	[]
5	Sınıfta başkalarıyla çalıştığımda daha iyi öğrenirim.	[ ]	[ ]	[ ]	[ ]	[ ]
6	Hocanın tahtaya yazdığı şeyleri okuyarak daha iyi öğrenirim.	[ ]	[ ]	[ ]	[ ]	[ ]
7	Sınıftan birisi bir şeyin yapılışını söylerse daha iyi öğrenirim.	[ ]	[ ]	[ ]	[ ]	[ ]
8	Alıştırmaları / ödevleri sınıfta yaptığımda daha iyi öğrenirim.	[ ]	[ ]	[ ]	[ ]	[ ]
9	Sınıfta duyduklarımı okuduklarımdan daha iyi hatırlarım.	[ ]	[ ]	[ ]	[ ]	[ ]
10	Konuyla ilgili açıklamaları okuduğumda daha iyi öğrenirim.	[ ]	[ ]	[ ]	[ ]	[ ]
11	Bir şeyin modelini yaptığımda/çizdiğimde daha iyi öğrenirim.	[ ]	[ ]	[ ]	[]	[ ]
12	Konuyu açıklayan bilgileri okuduğumda daha iyi anlarım.	[ ]	[ ]	[ ]	[ ]	[ ]
13	Yalnız başıma çalıştığımda konuları daha iyi hatırlarım.	[ ]	[ ]	[ ]	[ ]	[ ]
14	Sınıf projesi olarak yaptığım şeyleri daha iyi öğrenirim.	[ ]	[ ]	[ ]	[ ]	[ ]
15	Sınıfta bilgileri uygulayarak öğrenmek hoşuma gider.	[ ]	[ ]	[ ]	[ ]	[ ]
16	Çalışırken resim/şekil çizersem daha iyi öğrenirim.	[ ]	[]	[ ]	[ ]	[ ]
17	Öğretmen sınıfta dersi anlatırsa daha iyi öğrenirim.	[ ]	[ ]	[ ]	[]	[ ]
18	Yalnız çalıştığımda daha iyi öğrenirim.	[ ]	[]	[ ]	[ ]	[ ]
19	Sınıfta rol yaparak öğrenmeye katılırsam daha iyi öğrenirim.	[ ]	[ ]	[ ]	[ ]	[ ]
20	Sınıfta birisini dinlediğimde daha iyi öğrenirim.	[ ]	[ ]	[ ]	[ ]	[ ]
21	Sınıf arkadaşımla ödev yaparak öğrenmek hoşuma gider.	[ ]	[ ]	[ ]	[ ]	[ ]
22	Uygulama yaparak çalışırsam daha iyi öğrenirim.	[ ]	[ ]	[ ]	[ ]	[ ]
23	Başkalarıyla çalışmayı tercih ederim.	[ ]	[ ]	[ ]	[ ]	[ ]
24	Başkalarından dinlemek yerine okuyarak daha iyi öğrenirim.	[ ]	[ ]	[ ]	[ ]	[ ]
25	Sınıf etkinliklerine katkı yaparak öğrenmek hoşuma gider.	[ ]	[ ]	[ ]	[ ]	[ ]
26	Ilgili etkinliklere katılabilirsem sınıfta daha iyi öğrenirim.	[ ]	[ ]	[ ]	[ ]	[ ]
27	Sınıfta tek başıma çalıştığımda da daha iyi öğrenirim.	[ ]	[ ]	[ ]	[ ]	[ ]
28	Etkinlikleri tek başıma yaparak öğrenmek hoşuma gider.	[ ]	[ ]	[ ]	[ ]	[ ]
29	Dersi dinlemek yerine ders kitaplarını okuyarak daha iyi öğrenirim.	[ ]	[ ]	[ ]	[ ]	[ ]
30	Kendi başıma çalışarak öğrenmeyi tercih ederim.	[ ]	[ ]	[ ]	[ ]	[ ]

Not: Ölçek maddeleri Richards ve Lockhart'ın kitabından alınmıştır (1996, p. 76) ve Dr. Ercan Tomakin (2012) tarafından Türkçe'ye çevirilmiştir.

APPENDIX K: Achievement Test (Formal Exam)

NAME:……..…..SURNAME:……...…..……NUMBER:…….. CLASS:……..….

I. READING: Read the text and write *TRUE or FALSE* (5x3=15p)

What should you do when you have the flu?

When you have the flu, you'd rather stay home and get a good rest. It is important that you stay in bed. You need more vitamins, too. So you should eat healthy food like fruit and vegetables. The best thing to do is to eat chicken soup.This will help you get better. Also, you'd rather drink lots of water. This is good for your sore throat and runny nose. When you have very bad body aches and feel very tired, you'd better take some medicine. They will make you sleep well and feel better. In short, because of the symptoms, you won't feel very strong so you'd better get a long rest when you catch the flu.

1. When you have the flu you need more vitamins. _____
2. You should have a rest when they catch the flu. _____
3. Drinking lots of water is good for your sore throat. _____
4. When you catch the flu, you should do lots of sports. _____
5. You should eat fast food to get better. _____

II. VOCABULARY: A. Match the photos with the health problems. (10x1=10p)

a rasha backachea cougha toothachea feversprained wrist
a runny nosebroken lega sore throatthe flu

B. Match the words with their similar meanings. (5x1=5p.)

……1. install	a) very important
……2. gather	b) way
……3. route	c) set up
……4. vital	d) make less
……5. reduce	e) come together

III. GRAMMAR: A. Choose the correct word. (5x1=5p.)

1. Have you ***ever / yet*** sprained your wrist?
2. Pedro has had a terrible stomachache ***for / since*** morning.
3. The doctor has ***yet / just*** run some tests on the patient.
4. I have ***never / already*** felt like this. My headache is killing me!
5. My friend and I have had a terrible sore throat ***for / since*** three days.

B. Complete the sentences with *must* or *mustn't* . (5x1=5p.)

1. We ……...…. drink this water.It is not clean.
2. You ……..……. be quiet in a hospital.
3. Children ……..……. play in dangerous areas.
4. You …….. study for your exams to get high grades.
5. Students ……..…. come late to the class.

C. Complete the sentences with "*am/is/are going to*". (5x1=5p.)

1. I ……... throw a birthday party next weekend.
2. Karen ……..…… do shopping for the surprise part tonight.
3. They ……..……. invite their friends next Sunday.
4. My cousin ……..…… help me with the organisation of the party.
5. We ……..…….celebrate our graduation next month.

IV. WRITING: Give an advice using ' Should ' for each situation (5x3=15p.)

take some painkillers	wear your coat	use another road	open the window	study a lot

1. A: It is very cold outside. B: _____

2. A: The room is very hot. B: _____

3. A: I have got a terrible headache. B: _____

4. A: I have an exam tomorrow. B: _____

5. A: This road is very dangerous for drivers. B: _____

V. LISTENING: Listen to the people and write True (T) or False (F). (5x4=20p.)

Dialogue 1. 1. The barbecue party is on Friday. _____

2. Linda is going to study Maths in the morning._____

Dialogue 2. 3. Daisie's sister is going to cook for the party._____

4. Daisie's partys starts at 2.00 p.m. _____

Dialogue 3. 5. Nicky can't join the party._____

VI. SPEAKING: What are you going to do next weekend? (20p.)

Comprehension 4p.	Vocabulary 4p.	Pronounciation 4p.	Accuracy 4p.	Fluency 4p.	Total 20p.

APPENDIX L: Achievement Test Results

	Student's Name and Surname	1st Test	2nd Test	3rd Test
1	Be***** Kü***	62	60	67
2	İc*** Tu*** De*******	68	35	56
3	Ca*** Yu*** Yü*********	51	60	60
4	Di**** Sa****	52	47	85
5	Se***** Ay*****	32	76	79
6	Ha**** Ho*****	81	41	40
7	Ka****** Hü***** Ka*	64	70	86
8	Kü*** Çı****	83	77	74
9	Me*** Ar***	50	45	74
10	Me*** Ça***	62	78	73
11	Ha** Ra** Ha*** Ha***	78	67	65
12	Ne****** Ha****	50	54	30
13	Ni***** Ar****	67	89	92
14	Öz** Şa***	57	67	74
15	Ra*** Yı****	89	83	89
16	Ra** Oz***	68	71	67
17	Ra***** Sa**** Ya**** Ya****	100	93	88
18	Se****** To*	50	60	70
19	Şe*** Ak***	93	70	89
20	Ta***** Ah*** Kh*****	68	64	70
21	We**** Ja*** Mo******	82	62	78
22	Ya**** De*****	66	63	68
23	Ya***** Tü********	51	83	79
24	Ze**** Ya*******	60	61	56
25	Ze**** Es**	88	88	100
26	İr**** Öz****	57	67	79

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