

Esp in Action: Application of LEM in Gaziantep Industry Through Online Language Teaching

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Abstract

The study was conducted in Gaziantep, an industrial city in the Southeastern Anatolia region of Türkiye. This study was a joint effort of Gaziantep University and a company that participated in many international activities. Through fieldwork and literature reviews, it was determined that there are no foreign language studies towards business people and business English in Gaziantep. The objectives of this study, was aimed at business people and the business world, were determined based on this preliminary research and existing foreign language teaching studies; the goal was to determine how to close the language gap in the business world. Distance education was used to make the study easy to access; for participants to be able to access the training program at any time and place. After necessary procedures were established, the employees who could participate in the project were determined. The employees' primary needs and foreign language levels were determined with a pre-test and a need analysis. A training model was developed accordingly, and the eight-week training was started. The training content was organized according to the lean educational method, considering the needs of all participants, and the efficiency of the method in question was examined. Training content, incorporating technological tools and interactive materials, was planned to ensure that participants enjoyed learning throughout the course. The success of the training was evaluated based on findings obtained by comparing pre-test and post-test results. In light of these findings, it has been proven that language success can be increased quickly by using the lean educational method effectively. It has been determined that great success can be achieved quickly with the lean educational method, a training model used to achieve rapid success in areas for adult groups and the business world. In addition, this study determined that people with time constraints could easily participate in the program with distance education and save time while doing so.

Keywords: lean educational method, ESP, distance education, academic success

1. Introduction

Nowadays, students start learning English in primary schools, and the relevant learning process continues in high school. Individuals prefer to study at universities to have a good profession after high school. English is still taught in universities because it is as important in real life as in school. Although English is a compulsory course in many departments of universities in Türkiye, one of the requirements for students to graduate is to pass the English course successfully. English lessons, which occur in face-to-face environments in formal education, generally occur as distance education in non-formal education institutions. However, with face-to-face interaction in the classroom, students can learn essential words and grammar rules. Therefore, they are expected to use English appropriately outside the university when they graduate. However, when we look at the actual situation, very few people can use this language effectively in their professional lives. One of the most essential contexts in which people need English is business. English is currently the most common language used by societies worldwide that do not share the same mother tongue, and this is referred to as 'Lingua Franca' in the literature. In this context, we see adequate foreign language proficiency as one of the most needed qualifications for the employees of companies and institutions with multinational business potential. In order to meet this requirement in the business world, it is necessary to know and use business English effectively. Unlike the English taught in formal education, business English refers to a specific use of language that emphasizes certain types of communication in a business context, such as negotiations, presentations, and business writing, as mentioned (Ellis, 1994; Chunling, 2015). People in business are expected to be able to use English proficiently to communicate with their colleagues from other countries, communicate with foreign business partners, speak on necessary business issues, and carry out the

correspondence required in business life. Gaziantep is a large industrial city whose economy is based on selling goods to neighboring countries. This situation makes using English very important in the Gaziantep Organized Industrial Zone.

Unfortunately, in the business environment here, it has been noticed that managers, engineers, and company employees, despite receiving English instruction through various courses and educational levels since childhood, still need assistance in using English effectively. In light of these significant findings, the existing project covers the professional English knowledge needs of the personnel in the export operation unit, which they need in their professional business lives. The results and analysis evaluations, by measuring the business English competencies of the participants at the beginning of the project, provide crucial insights into the current state of English proficiency in the business environment. The personnel in the export operation unit were subjected to an eight week, sixteen-hour training with course materials and course contents prepared within the framework of the lean method. The success level of the training was measured with the post-test evaluation at the end of the training process, which showed specific results. The Findings and Discussion section will delve into these analysis results, sparking further interest and discussion. In addition, the process progressed through three essential parts determined at the beginning of the project. These two essential parts are as follows: (a) Using the Lean Method to Develop the Professional English Program, (b) The Effect of the Lean Method on Professional English Knowledge While actively performing the work, and (c) Integration of the Lean Method with Distance Education Model. These three topics and their relations are essential in the current study.

Lean is a systematic approach that eliminates waste and adds value to processes. It means that everyone has their work process. This method adds value by identifying and eliminating unnecessary steps that create redundancy, do not add value, or even prevent work from being done or completed. Therefore, organizations that use the lean method are more effective in their activities and services. Efficient outputs in a short time were achieved in the project, where waste and losses were minimized by applying the principles of the lean method. The course contents designed for the needs of the export operations unit include essential business English subjects and have significantly contributed to our ability to identify needs throughout the process. It is observed that the project, which adapted the lean method to training models to ensure the most efficiency and learning in the available time, achieved its goal thanks to the evaluation surveys we conducted with the participating staff in the middle and at the end of the training.

Turkey is a developing country in foreign language education, and the importance of language education has increased in recent years during the harmonization process with the European Union. In this context, export-oriented companies' demand for professional English is increasing as exporting companies' ability to complete their work smoothly, leave a good impression on the customer, and communicating effectively depends mainly on the export unit staff having necessary English proficiency. Our country's exports are increasing significantly yearly, but the desired targets have not been achieved for years. It is seen that the course contents, which were planned to be implemented in the distance education courses to be prepared for the export operation unit personnel at the beginning of the project and prepared with the lean method in the light of needs analysis, were scientifically successful with the post-test evaluations made at the end of the project. One of the ways to reach the same level as developed countries within the framework of international trade is to enable company employees to compete with people in developed countries. Foreign language education is one of the most important ways to achieve this goal. Achieving this goal will be easier if distance education vocational foreign language courses use the most appropriate methods and techniques. For this purpose, it is thought that the relevant project will contribute to the professional foreign language proficiency of the export operation unit staff, and the export operation unit processes will be carried out in a more professional framework, thus taking our country one step further. This project successfully achieved these primary objectives and has made qualified contributions to the lean method, business English, and distance education field.

On the other hand, this study offers a unique and comprehensive approach by integrating lean method techniques into business English. Adapting distance education to business English and utilizing the lean method as a production tool represents a significant investment in teaching English and working with business professionals. The study aims to bridge the education gap in the business world, providing both time and cost savings. The importance of this study has been further emphasized by the COVID-19 crisis, particularly in meeting employees' language needs during the pandemic. As traditional education faced disruptions, the transition to online platforms and tools had a profound impact, and this study adeptly leveraged the opportunities of this shift to facilitate remote learning. The integration of lean method techniques into business English is a novel approach that has the potential to revolutionize language education in the business world. This study intends to increase the efficacy and efficiency of language education for business professionals by integrating lean concepts, such as waste reduction and continuous improvement, into language learning.

Furthermore, adapting distance education to business English is particularly timely in light of the global shift towards remote work. As businesses increasingly operate across borders and time zones, effectively communicating in English has become essential. Through leveraging distance education tools and platforms, this study seeks to provide business professionals with the flexibility and accessibility they need to develop their language skills.

2. Literature Review

Learning a foreign language no longer only takes place in the classroom environment. This process has also been carried into non-classroom environments. By taking advantage of Web 2.0 tools that align with the requirements of the 21st century, it provides education processes outside of classical classroom environments. It provides more flexible opportunities to meet student needs. For this reason, activities and experiences that students can do outside the classroom with distance education methods and online tools are becoming increasingly important. Online learning, especially with the help of different technologies, offers individuals the chance to see and learn rich language patterns and the use of these patterns in daily life. This process empowers individuals to select materials, utilize preferred learning strategies, and manage their time. In short, it enables students to act independently and autonomously. During the project, web technologies were extensively utilized in language learning. In other words, the use of the distance education model in the service of language education has been an issue that language educators have thought about and addressed in various ways for a long time. Various studies on the importance of technology in language education reveal the necessity for language learners to practice and use the language in a social and interactive environment (Thomas, 2006). As Seimens (2004) puts it, attribution theory stands out as the most prominent of learning theories in the digital age. According to this approach, learning and knowledge emerge from different thinking patterns, and it is necessary to support and maintain associations to facilitate the learning process in daily life. It is much more critical for individuals to have more learning capacity than their existing knowledge. Therefore, where to find information has become much more important than knowing it. This shift in focus empowers learners, inspiring educators to harness the potential of technology in their teaching.

Regarding learning methodologies, technology facilitates the flow of information and encourages individuals to go beyond the curriculum and take responsibility for their learning (Campbell, 2006). In the educational processes of the project, technology serves as a facilitator, with the educator assuming the role of a producer, and both elements encourage individuals to participate in the process. The educator's most significant role is to enhance the success and quality of language teaching by integrating distance education models into foreign language education within the innovative teaching method, the Lean Educational Method (LEM). This emphasis on the role of educators underscores their value and importance in integrating technology, making them feel more integrated into the learning process through innovative 21st-century skills and new approaches to education.

Lean has been successfully implemented in the industry in the past and non-industrial areas in recent years. It is based on people, changing behavior, and continuity. Lean is an approach to eliminating waste. It has begun to prove its impact on the development processes in the field of education and the innovations it has made in the development process in other industrial areas. The field of education is very new in this context. Lean practices have shown that added value can be created in student success by keeping awareness at a high level, reducing education costs, reducing preparation times in jobs, continuously improving waste, and allowing processes to progress in a planned manner.

The Lean method, a powerful tool for organizational development and change, is designed to enhance the efficiency and success of individuals in a continuous learning mode. Its adaptability is a key strength, allowing it to be tailored to meet the specific requirements of various sectors, including foreign language education. For instance, it can address the professional English needs of export unit personnel in industrial companies. This adaptability, a testament to the lean method's interdisciplinary nature, which originated in the industrial sector, instills confidence in its ability to effectively address diverse educational and industrial needs (Tilfarlıoğlu, 2020).

Within the initiation of the technology era, the requirement for the English language has emerged and expanded more than ever. English has become widespread around the globe and has gained much importance. However, people worldwide use English as the pivotal language to interact and share their thoughts. This way of sharing and using English among the world population enables English to be the 'Lingua Franca' of the world. As a widely commonly used language, English has a variety of uses in many locations for both native and non-native English speakers. However, this undoubtedly highlighted the relevance of the English language not only in a specific profession but across various fields where English may be used as a medium of instruction. During the Industrial Revolution, which began in England, the need for English in global trade gained significant importance. The number of English speakers is growing every day. The world now requires English for communication and industrial skills. The need for language in various domains has led researchers to investigate whether using English in specific areas impacts becoming a better English speaker.

2.1 Need Analysis

Need analysis is an essential procedure that entails gathering and examining data to comprehend a particular population's needs and preferences. This data is the basis for developing an educational program to fulfil their needs. Surveys, interviews, focus groups, and other data-gathering techniques are frequently used to get pertinent data for the requirements analysis process. By obtaining this data, educators may develop interesting, practical, and pertinent

educational programs that meet the unique needs of their students and get a deeper understanding of the demands of their audience (Kayi, 2008). A needs analysis approach is essential to identify the gaps and requirements of each learner or group of learners in the target language, as each student needs particular skills and abilities to communicate in that language.

Identifying the needs of students in a classroom setting helps the teacher design a lesson that will work efficiently to maximize student benefits and produce impressive results quickly. However, this study focuses primarily on students within the English for Specific Purposes (ESP) framework. The concept proposed by Hutchinson and Waters (1987) is the foundation for achieving the study's goals. According to the study, conducting needs analyses is crucial for facilitating efficient instruction and learning in ESP settings. It involves determining where students fall short and aiming to enhance their learning efficiency. Needs analysis is used in language education to provide specialized curriculum and resources. It involves a better understanding students' objectives, motivations, and backgrounds.

In education, conducting a comprehensive needs analysis is a theoretical exercise and a practical approach. It allows insights into students' objectives, motivations, backgrounds, and preferred learning methods. This approach, employed in various other industries, is particularly potent in education and training. By discerning these needs, educators and researchers play a crucial role in tailoring courses and developing materials better suited to meet the learners' requirements. This recognition enhances learning outcomes and significantly improves overall learner performance, thus underscoring the paramount importance of this work in the field.

2.2 *The Role of ESP*

Naturally, the level of progress in this area varies from state to state. For instance, the situation in developed nations is significantly different from that in third world nations, despite minor improvements. The latter is making slower progress toward the scientific and technological revolution. One critical global component of this movement is scientific research. English Language Teaching (ELT) is particularly emphasized as it teaches new technologies and science in today's globalized world. As a result, various research initiatives have recently been undertaken in different organizations, institutes, and conferences to explore diverse fields. There is a need for a specific language that caters to the demands of particular circumstances based on the learners' specialization, involving practical and functional applications of the language in a real-life setting (Widdowson, 1978; Rogers, 1969). Consequently, English for Specific Purposes (ESP) was developed to support and contribute to this scientific and innovative transformation.

Over the last two decades, the prevalence of ESP has significantly increased. Many ESP courses meet the investigation's requirements. However, the focus of ESP course developers varies from one area to another, influenced by the number of candidates and questions, which has led to particular areas expanding while others have been neglected.

In light of the above discussion, ESP can be viewed as the language used by English native speakers and nonnative speakers alike. More importantly, it is an approach that is carefully tailored to the specific needs of learners based on their professional, vocational, or academic domains. The current study focuses on specific domains such as English for engineering studies, English for musicians, English for vocational purposes, and English for industrial purposes. Through thoroughly examining these domains, the study aims to provide insights into the principles and practices of ESP. On the other hand, Mackay and Mountford (1978) suggest a definition of ESP in terms of three purposes:

Occupational requirements (e.g., international telephone operators, civil airline pilots.)

Vocational training programs (e.g., for hotel and catering staff and technical trades.)

Academic or professional study (e.g., engineering, medicine law.)

Richard (et al. 1992) also define ESP as referring to the role of English in a language course of instruction in which the specific needs of a particular group of learners fix the content and aims of the course. However, specific courses for science, technology, and industry will differ from the ones that aim to teach English for general purposes.

2.3 *Lean Educational Method*

Toyota introduced the lean methodology in 1960 as a requirement for mass manufacturing. When first implemented in the 1950s, this revolutionary idea was met with opposition and doubts about its suitability for industrial systems. However, the actual usefulness and significance of lean were not immediately evident until the United States and Japan implemented lean principles (Womack & Jones, 2010). The rapid acceptance of lean as a strategy for cutting and eliminating waste in manufacturing is genuinely inspiring. This method became a crucial component of the automobile production process when automakers started employing it to reduce production losses (Zivkovsky & Zivkovsky, 2010). As a result, Toyota received universal acceptance from all manufacturers due to Lean's success (Atkinson & Linehan, 2008). As a result of its success, many organizations have embraced the lean discipline for their business operations and production processes. This innovative approach has steered organizations in a new direction, prompting the question: How can we enhance our

quality standards and reduce waste more effectively? This shift in thinking has led to a greater appreciation for new attitudes and disciplines in various scenarios. Recognizing that each situation is unique, there is a greater focus on identifying the most suitable methods to ensure efficient production (Zargun & Al-Ashaab, 2013).

In summary, lean aims to address the demands of different industries and organizations while soliciting feedback on their deficiencies and requirements to improve performance. Lean, which has demonstrated effectiveness in the manufacturing industry, presents a viable method for producing human education in large quantities. By applying lean principles, it can strive for exceptional results that help learners in every area achieve the objectives of better education everywhere. Importantly, Carvalho (et al., 2013) support this notion, suggesting that lean could establish better and more effective approaches in educational environments.

2.4 Distance Teaching

As the Industrial Revolution spread globally, communities realized education was more comprehensive than specific physical locations and times. The concept that education could only occur inside a classroom at certain hours of the day was challenged and eventually replaced by a more flexible and easily accessible method of instruction. This shift in perspective ushered in a new era of education, allowing anyone with the desire and ambition to study at any time and from any place. The modern world and the ongoing changes in civilizations have shaped different educational expectations, leading to the development of new educational models, such as remote learning, and meeting the evolving cultural demands (Girginer, 2002).

According to Wedemeyer (1991, as cited in Keegan, 2005, p. 7), modern students can participate in lessons at their convenience and from any location without needing to adhere to rigid schedules or attend physical classes on specific days. This level of convenience has proven beneficial for numerous educational institutions, which have successfully integrated traditional and distance learning methods.

3. Methodology

3.1 Research Design

One valuable and practical type of applied qualitative research is action research. It entails a methodical, organized, and cooperative assessment process to raise life quality via introspection and inquiry. This approach seeks to actively include individuals who are impacted in order to impact real-life issues positively. The usefulness and relevance of action research are further highlighted by Mills (2018) and Johnson (2002), who offer insightful analyses of the theories and techniques behind the field. The current study aimed to effect positive change in response to the difficulties presented by inadequate foreign language communication in the corporate setting. It aimed to solve the requirement that workers improve their proficiency in formal language. In order to assess the efficacy of teaching foreign languages in the corporate setting with LEM methodologies and remote education resources, the study employed the action research methodology. The action research approach was used in conjunction with qualitative study designs to determine the project's effectiveness. Nonetheless, this study, carried out as a scientific research project, provided light on a particular area of language instruction as a trial application in the Gaziantep region.

3.2 Participants and Setting

The scientific project research target group was the export operation staff of A.C Company, located in Gaziantep. It consists of 20 participants working in the export operations unit. It is known that 5 of the participants in the study group were female (25%), and the remaining 15 were male (75%). Similarities in the demographic information of the research group are essential in terms of the meaningfulness of the study. In addition to being supportive, it is also an essential factor in determining the reliability of the data. The fact that the study group was predominantly aged 25-30 (85%) also positively contributed to the group dynamics (Table 1). Determined within the scope of the relevant analysis, lesson plans, and materials were prepared for an eight-week, sixteen-hour study group. The course contents prepared according to the analysis enabled the group to participate in the lessons. Considering the needs, a curriculum for the courses is prepared and applied to the company's export operation unit. A pre-test was conducted, and significant differences in scientific achievement levels in the study group (N = 20) were observed with the post-test.

Table. 1. Demographic Information

		N	Percentage (%)
Gender	Female	5	25
	Male	15	75
Age	25-30	17	85
	31-35	2	10
	36-40	1	5
Experience	1-5 Years	14	70
	6-10 Years	5	25
	11-15 Years	1	5
Total	20	100	

3.3 Data Collection Tools

The current study makes use of several data-gathering instruments. In the program's early stages, surveys for needs analysis were used to gather information before the courses were put into teaching. Next, prior to the program's implementation, assess the participating staff members' existing level of language ability. Competence in business English was used as a pre-test to prepare for the measuring exam. This exam aims to assess the student's current proficiency in business English. Formative assessment questionnaires were given to the participants during the implementation procedure of the relevant study. After the application procedure was finished, the business English proficiency exam utilized in the initial evaluation was given as a post-test. The figure below shows the tools utilized during the project.

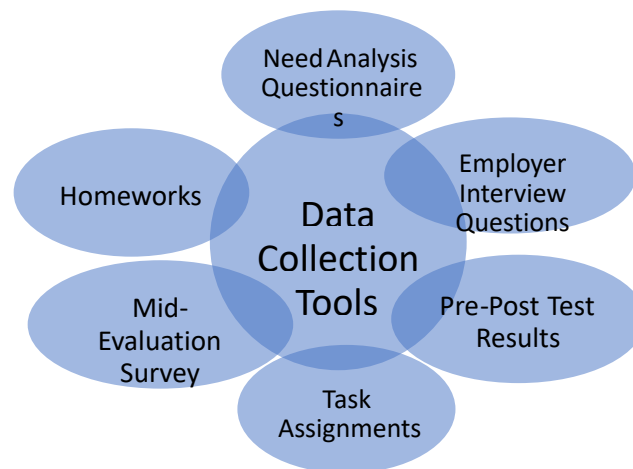


Figure 2. Data Collection tools

3.4 Data Analysis Procedure

The pre-test and post-test findings were analyzed using the t-test statistical approach in this study. The Statistical Package for Social Sciences (SPSS) version 23.0 was utilized for the analysis. The corresponding chapter thoroughly summaries the research study report's results. In order to ascertain the participants' perceptions of their level of English proficiency, the research also thoroughly examined the questionnaires they had completed. In order to create successful language learning programs and interventions for the participants, the study also assisted in identifying their unique language learning requirements. The SPSS program was also used to analyse the questionnaire analysis data. Descriptive statistics for the demographic factors on the questionnaire were obtained for the research investigation. The average values for the research questions were determined by the frequency with which particular things appeared. The pre-test and post-test data were analyzed statistically in the research study using the t-test.

4. Findings

Descriptive statistics for the demographic factors on the questionnaire, such as age, gender, and educational background, were obtained for the research investigation. The average values for the research questions were determined by the frequency with which. This section will analyze the study results using the dependent sample t-test. The findings obtained within this test's scope measured the study's significance and success. The dependent sample t-test is performed to measure a variable's observed successes, expectations, and speeds in two different situations and to see whether there is a significant difference due to the measurements (Field, 2013). Dependent sample t-tests are parametric tests, and the significance of the findings is obtained by measuring the normality value in these tests. It is known that it will contribute to the degree of in this context; the pre-test, post-test, and normality evaluations of the study we conducted with 20 people in the A.C Company export operations unit are as follows.

Table 2. Normality Test

Variables	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statisti	df	Sig. c	Statisti	df c	Sig.
	,240	20	,004	,870	20	,012

When examining the normality values in Table 2, the data obtained from the Kolmogorov-Smirnov and Shapiro-Wilk tests of the study yielded Sig values of .004 and .012, respectively. Since Sig=0.05 has this value, a significant result was obtained in normality values in the study, and it was seen that the study had a normal distribution. This significant finding underscores the importance of the research and its potential impact on the field.

Table 3. Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	45,1000	20	16,30596	3,64612
	Posttest	52,9000	20	15,88743	3,55254

The study conducted in Table 3 gives the mean values and standard deviation levels of the pre-test and post-test. When this table is examined, the significant increase in the pre-test and post-test averages demonstrates the resounding success of the current study. While the pre-test average (N=20) was 45.1, the post-test data obtained at the pre-test of the professional English application with the Lean method showed a substantial increase and pretested to be 52.9 (N=20). Moreover, considering the significance value (Sig=,000; <,005) in the correlation table of the pre-test and post-test performed similarly, we can confidently say that a significant change has occurred, further affirming the study's success.

5. Discussion and Conclusion

The current field research applied the lean approach to business English implementation, focusing on specific learning objectives. The results, presented in tables, included statistical data, analysis of a comprehensive survey, and an examination of the advancements in business English competence. The significant levels of the participants' pre-and post-test results in the scientific environment were assessed using the results produced from the dependent t-test and the independent variables' t-test analysis patterns. This research investigation has enriched the literature on professional English and the Lean learning approach and provided practical insights for educators and professionals in the field. Meanwhile, in the twenty-first century—the age of digital transformation—the study demonstrated the effectiveness of professional English instruction that may be provided virtually via the Internet. In addition, the worldwide pandemic spreading that emerged in the first half of 2020 coincidentally led to a rise in demand for digital tools and distance learning; therefore, there were no adverse effects on project work, which advanced in line with actual circumstances. Utilising the 'Zoom' application database, a Web 2.0 technology, the study was done online as part of a planned distance education program.

An additional benefit of remote learning is the lean methodology, which eliminates waste and losses. The pertinent procedure has been condensed to save time, space, and money. Thanks to the requirements analysis surveys carried out throughout this training program, the lean teaching method's participant-oriented approach has contributed to the "load levelling" idea. The results show that the pertinent surveys were successfully employed to minimize study-related losses and create an application plan that largely satisfies participant demands. The eight-week program was planned concurrently with completing the requirements analysis based on participant and employer expectations. The course topics were chosen following the needs analysis, and the program's pace and syllabus were organized.

Essential insights into the efficacy of lean-informed course design were gained via implementing LEM in an English for Specific Purposes (ESP) course. However, before the course is put into action, it is important to stress that it is purposefully focused on a specific participant demographic with well-defined goals. The two most important factors the researcher carefully considered were the requirements analysis and the participants' present situations. Thus, the main objective was to use the LEM technique to accomplish the specific goals mentioned in the curriculum, which were made to fit the particular requirements of the intended participant group.

As a result of this study, the employees' English ability has improved. The approach's efficacy and research tailored to individual requirements were cited as the reasons for the growth. Increased efficiency from the current circumstances resulted from the stakeholders' sharing responsibility for the process, with all participants and the teacher actively participating throughout the training. These LEM results have provided insights for further research and sparked the development of a design that will enable higher efficiency in a shorter time. The potential for additional research and development is a promising prospect eagerly anticipated to be investigated further.

6. Limitations and Recommendation for Further Researches

The rigorously designed eight-week study sought to determine how well the LEM technique affected language learning objectives. There were no notable difficulties during the trial, and the pre-test and post-test results clearly showed the method's beneficial effects on language acquisition. Nevertheless, several fundamental issues with each procedure arose before and during the application process. The time and date of the courses create difficulty since the participants have busy schedules and workloads. However, when evaluated holistically, the process was smooth and easy for both participants and the researcher. The enthusiasm of the participants for attendance supported the process. Still, with minor problematic issues, the study helped the participants improve their language proficiency and provided specific language skills related to their field. In the following studies, with various groups and professional areas, the effectiveness of the study can be measured. Along with online education in traditional settings, applications can benefit the scope of the study.

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Data sharing statement

No additional data are available.

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