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**Title**

**The Effectiveness of Medical Discourse on English as a Foreign  
Language Learners' Lexical Competence  
The Case of First-Year Students during the COVID-19 Pandemic**

**Submitted by  
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**Supervised by  
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**Yasmina BENZIDA**



# Statement of Authorship

I, Yasmina BENZIDA, hereby declare that this doctoral thesis entitled *The Effectiveness of Medical Discourse on English as a Foreign Language Learners' Lexical Competence: The Case of First-Year Students during the COVID-19 Pandemic*, supervised by Professor Saliha CHELLI of Mohamed Khider University of Biskra is my work and, to the best of my knowledge, all the sources that I have used and/or quoted have duly been indicated and acknowledged by complete reference.

Mrs. Yasmina BENZIDA

29/10/2024

*Yasmina .B*

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*The Researcher;*  
**Yasmina BENZIDA**

## DEDICATION

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## ABSTRACT

This study investigates the effectiveness of introducing medical discourse in enhancing students' lexical competence, particularly in light of the recent COVID-19 outbreak. This research explores how incorporating medical terminology can improve students' ability to engage in formal and informal conversations about healthcare, focusing on the impact of discussing medical topics like pandemics, viruses, vaccination, and healthcare. Using a mixed-method research approach (MMR), the research involved experimental and control groups of 15 first-year EFL students for each group in English at Mohamed Khider University of Biskra (MKUB). Over two months, these students participated in activities designed to enhance their vocabulary using medical discourse, including class presentations, videos, and texts about COVID-19. Data collection methods included an experimental design with pre-test and post-test assessments, classroom observations through the checklist, and a post-experiment questionnaire. The study tested the hypothesis: whether students exposed to medical discourse will engage in meaningful discussions about healthcare topics. The group statistics reveal that the experimental group improved from a pre-test mean score of **8.87** (SD = **6.19**) to a post-test mean of **26.33** (SD = **4.53**), while the control group increased from 12.27 (SD = **5.81**) to **15.20** (SD = **5.17**). Normality was assessed using the **Kolmogorov-Smirnov** and **Shapiro-Wilk** tests. The p-values for the pre-test control group (PRTCONT) were **0.200** and **0.271**, and for the post-test experimental group (POSTEXP), **0.200** and **0.868**, respectively, indicating normal distribution. While slight deviations were observed in the pre-test experimental group (PRETEXPRE) with  $p = 0.040$  (KS) and  $p = 0.111$  (SW), and in the post-test control group (POST-CONT) with  $p = 0.013$  (KS) and  $p = 0.110$  (SW), histogram and Q-Q plot visualizations confirmed the data were approximately normal. The findings indicate that integrating medical discourse into EFL classes significantly improved students' lexical competence, communicative skills, and confidence in discussing healthcare topics. The research highlights the importance of adapting the EFL curriculum to include specialized vocabulary relevant to real-world issues like healthcare, especially during crises. This study demonstrates the value of blending medical discourse into language learning to equip students with the skills needed for future challenges. However, the main limitation of the present study was the COVID-19 pandemic, which prevented the inclusion of larger participant groups, thereby restricting the generalizability of the findings.

**Keywords:** Medical discourse; lexical competence; EFL learners; COVID-19; healthcare topics; communicative skills.

## RESUME

Cette étude examine l'efficacité de l'introduction du discours médical dans l'amélioration de la compétence lexicale des étudiants, en particulier à la lumière de la récente épidémie de COVID-19. Cette étude explore la manière dont l'incorporation de la terminologie médicale peut améliorer la capacité des étudiants à s'engager dans des conversations formelles et informelles sur les soins de santé, en se concentrant sur l'impact de la discussion de sujets médicaux tels que les pandémies, les virus, la vaccination et les soins de santé. En utilisant une approche de recherche à méthode mixte (MMR), la recherche a impliqué des groupes expérimentaux et de contrôle de 15 étudiants de première année d'anglais langue étrangère pour chaque groupe en anglais à l'Université Mohamed Khider de Biskra (MKUB). Pendant deux mois, ces étudiants ont participé à des activités conçues pour améliorer leur vocabulaire en utilisant le discours médical, y compris des présentations en classe, des vidéos et des textes sur le COVID-19. Les méthodes de collecte des données comprenaient une conception expérimentale avec des évaluations pré-test et post-test, des observations en classe à l'aide de la liste de contrôle et un questionnaire post-expérience. L'étude a testé l'hypothèse suivante : les étudiants exposés au discours médical s'engageront-ils dans des discussions significatives sur des sujets liés aux soins de santé ? Les statistiques de groupe révèlent que le groupe expérimental est passé d'un score moyen de 8,87 (écart-type = 6,19) avant le test à un score moyen de 26,33 (écart-type = 4,53) après le test, tandis que le groupe témoin est passé de 12,27 (écart-type = 5,81) à 15,20 (écart-type = 5,17). La normalité a été évaluée à l'aide des tests de Kolmogorov-Smirnov et de Shapiro-Wilk. Les valeurs p pour le groupe de contrôle du pré-test (PRTCONT) étaient respectivement de 0,200 et 0,271, et pour le groupe expérimental du post-test (POSTEXP) de 0,200 et 0,868, ce qui indique une distribution normale. Bien que de légères déviations aient été observées dans le groupe expérimental du pré-test (PRETEXPRE) avec  $p = 0,040$  (KS) et  $p = 0,111$  (SW), et dans le groupe de contrôle du post-test (POSTCONT) avec  $p = 0,013$  (KS) et  $p = 0,110$  (SW), les visualisations de l'histogramme et du graphique Q-Q ont confirmé que les données étaient à peu près normales. Les résultats indiquent que l'intégration du discours médical dans les cours d'anglais langue étrangère a amélioré de manière significative les compétences lexicales, les aptitudes à la communication et la confiance en soi des étudiants lorsqu'ils discutent de sujets liés aux soins de santé. La recherche souligne l'importance d'adapter le programme d'enseignement de l'anglais langue étrangère afin d'y inclure un vocabulaire spécialisé relatif à des problèmes concrets tels que les soins de santé, en particulier en période de crise. Cette étude démontre la valeur de l'intégration du discours médical dans l'apprentissage des langues afin de doter les étudiants des compétences nécessaires pour relever les défis à venir. Cependant, la principale limite de cette étude est la pandémie de COVID-19, qui a empêché l'inclusion de groupes de participants plus importants, limitant ainsi la généralisation des résultats.

**Mots-clés:** Discours médical ; compétence lexicale ; apprenants EFL; COVID-19; Sujets de santé; Compétences en communication.

## الملخص

تبحث هذه الدراسة في فعالية تقديم الخطاب الطبي في تعزيز الكفاءة المعجمية لدى الطلاب، لا سيما في ضوء تفشي فيروس كورونا المستجد (كوفيد-19) مؤخرًا. يستكشف هذا البحث كيف يمكن أن يؤدي دمج المصطلحات الطبية إلى تحسين قدرة الطلاب على المشاركة في المحادثات الرسمية وغير الرسمية حول الرعاية الصحية، مع التركيز على تأثير مناقشة موضوعات طبية مثل الأوبئة والفيروسات والتطعيم والرعاية الصحية. وباستخدام منهج بحثي متعدد الأساليب (MMR)، شمل البحث مجموعتين تجريبية وضابطة مكونة من 15 طالبًا من طلاب السنة الأولى في اللغة الإنجليزية كلغة أجنبية في اللغة الإنجليزية في جامعة محمد خيضر بيسكرة. على مدار شهرين، شارك هؤلاء الطلاب في أنشطة مصممة لتعزيز مفرداتهم اللغوية باستخدام الخطاب الطبي، بما في ذلك العروض التقديمية في الفصل، ومقاطع الفيديو، والنصوص حول كوفيد-19. وشملت أساليب جمع البيانات تصميمًا تجريبيًا مع تقييمات قبل الاختبار وبعده، وملاحظات صفيّة من خلال قائمة التدقيق، واستبيان ما بعد التجربة. اختبرت الدراسة الفرضية التالية: ما إذا كان الطلاب الذين تعرضوا للخطاب الطبي سينخرطون في مناقشات هادفة حول موضوعات الرعاية الصحية. تُظهر إحصاءات المجموعة أن متوسط درجات المجموعة التجريبية قد تحسن من 8.87 (الانحراف المعياري = 6.19) قبل الاختبار إلى 26.33 (الانحراف المعياري = 4.53) بعد الاختبار، بينما ارتفع متوسط درجات المجموعة الضابطة من 12.27 (الانحراف المعياري = 5.81) إلى 15.20 (الانحراف المعياري = 5.17). وفيما يتعلق بدرجات التحسن، حققت المجموعة التجريبية متوسط تحسن قدره 17.47، وهو أعلى بكثير من متوسط المجموعة الضابطة البالغ 2.93. وعلاوة على ذلك، تم تقييم التوزيع الطبيعي باستخدام اختباري كولموغوروف-سميرنوف وشابيرو-ويلك. وكانت القيم الاحتمالية للمجموعة الضابطة قبل الاختبار (PRTCONT) 0.200 و0.271، وللمجموعة التجريبية بعد الاختبار (POSTEXP) 0.200 و0.868 على التوالي، مما يشير إلى توزيع طبيعي. في حين لوحظت انحرافات طفيفة في المجموعة التجريبية قبل الاختبار (PRETEXPRE) مع  $p = 0.040$  (KS) و  $p = 0.111$  (SW)، وفي مجموعة التحكم بعد الاختبار (POSTCONT) مع  $p = 0.013$  (KS) و  $p = 0.110$  (SW)، وأكدت تصورات الرسم البياني ومخطط Q-Q أن البيانات كانت طبيعية تقريبًا. تشير النتائج إلى أن دمج الخطاب الطبي في صفوف اللغة الإنجليزية كلغة أجنبية قد حسن بشكل كبير من كفاءة الطلاب المعجمية ومهاراتهم التواصلية وثقتهم في مناقشة مواضيع الرعاية الصحية. يسلط البحث الضوء على أهمية تكييف منهج اللغة الإنجليزية كلغة أجنبية ليشمل المفردات المتخصصة ذات الصلة بقضايا العالم الحقيقي مثل الرعاية الصحية، خاصة أثناء الأزمات. توضح هذه الدراسة قيمة دمج الخطاب الطبي في تعلم اللغة لتزويد الطلاب بالمهارات اللازمة لمواجهة التحديات المستقبلية. ومع ذلك، كان القيد الرئيسي لهذه الدراسة هو جانحة كوفيد-19، التي حالت دون إدراج مجموعات أكبر من المشاركين، مما حد من إمكانية تعميم النتائج.

الكلمات المفتاحية: الخطاب الطبي؛ الكفاءة المعجمية؛ متعلموا اللغة الإنجليزية كلغة أجنبية؛ كوفيد-19؛ مهارات التواصل؛ مواضيع الرعاية الصحية.

## LIST OF ABBREVIATIONS AND ACRONYMS

**AP:** Applying Pragmatics

**CALL:** Computer-Assisted Language Learning

**COVID-19:** Coronavirus Disease 2019

**E.g.:** example

**ELE:** English Language Education

**ELT:** English Language Teaching

**EMP:** English for Medical Purposes

**ERE:** emergency remote education

**GE:** General English

**HEIs:** Higher Education Institutions

**HL:** Health literacy

**IP:** Input processing

**LA:** Language Acquisition

**LAD:** language acquisition device

**MA LI:** Mobile-Assisted Language Learning

**MCQs:** Multiple-Choice Questions

**MKUB:** Mohamed Khider University of Biskra

**PILs:** Patient information leaflets

**SCT:** The sociocultural theory

**SLA:** Second Language Acquisition

**VLT:** Vocabulary Level Test

**WHO:** the World Health Organization

**ZPD:** Zone of Proximal Development

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# **General Introduction**

## **Outline**

1. Background of the Study
2. Statement of the Problem
3. Rationale of the Study
4. Aims of the Study
5. Research Questions
6. Research Hypotheses
7. Research Methodology
  - 7.1 Choice of the Method
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## **1 Background of the Study**

In December 2019, a pandemic originating from China rapidly spread worldwide. Despite warnings and quarantine efforts, the virus had already infected several countries. March 2020 saw the declaration of a worldwide pandemic by the World Health Organisation (WHO), naming it ‘Coronavirus Disease 19’ or COVID-19. Governments implemented lockdowns, quarantines, and airport closures and urged the public to stay at home. These measures have been implemented worldwide and are practiced daily by governments to safeguard their citizens. They include self-quarantine, remote learning, virtual work, and continuous disinfection of equipment and furniture (Alduhaim & Alkhaldy, 2023, p. 22).

The COVID-19 pandemic has introduced new knowledge and concepts about diseases, including new vocabulary terms like pandemic, epidemic, containment, and lockdown. Vocabulary is crucial for EFL learners’ language proficiency, but many struggle to communicate in crisis or healthcare because of their limited and underdeveloped vocabulary. This affects their ability to effectively address the pandemic’s impact in oral sessions and outside classes.

The COVID-19 pandemic has shifted Algerian universities’ focus from traditional classrooms to online and hybrid formats, with Mohamed Khider University of Biskra being no exception. The effects vary based on social and personal standing, requiring everyone to be well-versed in health-related topics like vaccination, crises, viruses, and pandemics, regardless of their education or medical expertise.

A lot of the medical and scientific terminology used during the epidemic is quite

specialised, and EFL students sometimes find it difficult to understand. It was difficult for them to provide correct answers or seek clarification. Misunderstandings regarding symptoms, testing processes, immunisation, or health guidelines during COVID-19 might have contributed to this, increasing the possibility of EFL learners making uninformed decisions about their health. We saw the necessity of teaching medical terms to EFL learners during the pandemic. Later, medical lexical knowledge was integrated into the oral expression curriculum.

Medical discourse is continuously evolving as a result of the rapid advancements in science and medicine, along with the ongoing discovery of diseases, viruses, vaccines, and treatments (Alduhaim & Alkhalidy, 2023, p. 22). Medical discourse is crucial to comprehend and use it since it is an integral part of medicine and has great anthropological relevance because it forms relationships within the field. It refers to the specific language used in the medical field, encompassing vocabulary, grammar, and communication styles used by doctors, nurses, pharmacists, and patients. Integrating medical discourse into EFL classes equips learners with the linguistic tools to navigate healthcare situations.

## **2 Statement of the Problem**

The COVID-19 pandemic has necessitated a significant shift in educational methodologies, particularly for EFL teachers who have transitioned from face-to-face learning to blended learning environments. This shift has highlighted a critical gap in the existing EFL curriculum, particularly for first-year students at MKUB, who struggle to effectively communicate in medical contexts due to insufficient instruction in medical vocabulary and discourse. Observations indicate that these students are unable to discuss and exchange information about the pandemic, revealing a lack of preparedness for engaging in

essential medical discussions. Consequently, there is an urgent need to adapt the oral expression curriculum to incorporate medical discourse, thereby enhancing students' lexical competence in healthcare-related topics.

As teachers at MKUB, We typically aim to introduce first-year EFL learners to a variety of topics to enrich their vocabulary and enhance their lexical competencies both in and out of the classroom. However, the ongoing COVID-19 crisis has compelled us to focus specifically on this area, prompting us to explore ways to improve their lexical skills in healthcare-related topics. This shift became necessary after observing that first-year oral students struggled to discuss and share information about the pandemic.

### **3 Rationale of the Study**

The basic reason behind the choice of the present work goes back to the COVID-19 pandemic that forced a sudden shift in educational priorities and methods, especially in the field of language learning. EFL students struggled to communicate effectively in medical contexts due to the lack of targeted instruction in medical vocabulary and discourse. This gap became apparent as the pandemic highlighted the need for clear and accurate communication in healthcare settings. The traditional EFL curriculum, especially at the first-year university level, was insufficient in equipping students with the necessary lexical competence to engage in medical discourse. Therefore, there was an urgent need to adapt the oral expression curriculum to better prepare students for such real-world challenges.

To address this issue, the present study proposes implementing Medical Discourse in the EFL oral expression curriculum. By adjusting the content to include specific medical terminology and communication strategies, the aim is to enhance students' lexical competence in medical contexts. This adjustment not only responds to the immediate

needs brought about by the pandemic but also prepares first-year university students to engage more confidently and effectively in medical discussions.

The rationale for this study stems from the pressing need to address the deficiencies in EFL learners' lexical competence, particularly in the context of medical discourse, which has become increasingly relevant due to the COVID-19 pandemic. The pandemic has underscored the importance of clear and accurate communication in healthcare settings, making it imperative for EFL students to acquire the necessary vocabulary and communication strategies to engage in medical discussions. By implementing medical discourse into the EFL oral expression curriculum, this study aims to bridge the gap between general language skills and the specialized vocabulary required in healthcare communication. This adjustment not only responds to the immediate challenges posed by the pandemic but also equips first-year university students with the confidence and competence needed to navigate real-world medical conversations effectively. The findings of this research will contribute to the development of a more relevant and responsive EFL curriculum that meets the evolving needs of students in a post-pandemic world.

#### **4 Aims of the Study**

The COVID-19 pandemic has significantly impacted EFL learners' vocabulary and language proficiency, making it crucial for oral expression teachers to introduce medical discourse to first-year learners. The researchers found that students struggled to discuss and exchange information about the pandemic, making it challenging to address this topic in the oral expression module.

The primary aim of this study is to introduce medical discourse into the oral expression module for first-year EFL learners. This adjustment is intended to enhance their

lexical competence by exposing them to the specialized vocabulary necessary for discussing and understanding topics related to the COVID-19 pandemic and healthcare. The researcher observed that many students struggled to communicate about the pandemic, highlighting the need for this specific area of focus. By integrating medical terminology, the study seeks to improve students' ability to discuss, exchange, and debate important issues in medicine and health care.

Another key goal of the study is to enrich students' vocabulary by exposing them to a variety of learning materials. These materials include watching videos, listening to presentations, and reading texts on pandemics, healthcare, and medical topics. Through these activities, EFL students are expected to expand their vocabulary knowledge, which is crucial for their overall language proficiency. The study also aims to help students develop these lexical competencies both inside and outside the classroom, equipping them with the language tools needed for real-world communication in medical contexts.

Finally, the study aims to determine whether this targeted instruction has a measurable positive effect on first-year EFL learners' lexical competence. Using an experimental design, the research can assess whether exposure to medical discourse improves students' ability to understand and use medical vocabulary. The study intends to evaluate the success of this treatment, providing insights into the effectiveness of incorporating specialized discourse into the EFL curriculum.

## **5 Research Questions**

The present study is an attempt to answer a set of questions related to implementing medical discourse to first-year EFL learners. The following research questions guide the objectives of the investigation:

1. Does the implementation of medical discourse in EFL classes affect students' lexical competence, particularly during the COVID-19 pandemic?
2. Does the exposure of EFL learners to medical discourse enrich their lexical competence and improve their ability to communicate on medical topics?
3. Is the development in learners' lexical competence during oral presentations observable through classroom observation?
4. What are students' perceptions about the implementation of medical discourse in EFL classes during the COVID-19 pandemic?

## 6 Research Hypotheses

Experimenting means having a null ( $H_0$ ) and alternative ( $H_1$ ) hypothesis. The present study is designed to test the following hypotheses:

**$H_0$ :** If EFL oral expression students are exposed to medical discourse, they will not develop their lexical competence.

**$H_1$ :** If EFL oral expression students are exposed to medical discourse, they will develop their lexical competence.

## 7 Research Methodology

When conducting research, researchers rely on two primary sets of frameworks: methodology, which describes the overarching approach and paradigm that guides the study, and methods, which describe the particular instruments, procedures, and tools used to gather data. The decision to choose a particular research method is generally determined by its suitability for the purpose of the research problem, questions, and objectives.

## **7.1 Choice of the Method**

The present research was born out of the effects of the global COVID-19 pandemic. The study focuses on the impact of the pandemic on EFL teachers, who have been asked to discuss topics related to the pandemic. This has led to a shift in communication and vocabulary, with new terms and concepts emerging. Vocabulary knowledge is crucial for EFL learners' language proficiency, but many struggle to produce communication on crisis or healthcare topics due to the pandemic, both in oral sessions and outside class.

The study aims to address the COVID-19 crisis by enhancing EFL learners' lexical competencies in healthcare topics. The research method used is Mixed-Method Research (MMR), which combines qualitative and quantitative approaches. The study combines experimental design, questionnaire, and classroom observation to provide a comprehensive account of the research problem.

The MMR method simplifies complex relationships, improving data accuracy and providing a comprehensive understanding of a phenomenon. Combining qualitative and quantitative approaches helps overcome the biases and weaknesses of single approaches. The study offers more comprehensive evidence than quantitative or qualitative research alone, providing a breadth and depth of understanding and corroboration.

### **7.1.1 Mixed Methods Approach**

Mixed Method Research (MMR) is a research approach that combines qualitative and quantitative methods. This method simplifies complex interrelationships among elements and provides a comprehensive account of the research problem. In this study, the researcher combined experimental design, classroom observation, and a questionnaire.

The integration of quantitative and qualitative data collection and analysis in these designs facilitates triangulation, offering a fuller understanding of the problem and enriching the study's conclusions. MMR enhances data accuracy and offers a comprehensive understanding of the phenomenon being studied, addressing the limitations and biases of individual methods. It is a type of research where researchers or teams combine elements of both methods for a broad understanding and corroboration.

## **7.2 The Population and Sampling**

There were fourteen (14) groups made up of 445 first-year students at MKUB who study English language and literature. The study involved (n = 15) regular learners in an experimental group and (n = 15) participants in the control group randomly selected. The participants received two months of treatment to enhance their lexical competence, using a blended approach of videos and texts about COVID-19, class presentations, and a pre-test and post-test. Following the treatment, participants were requested to express their attitudes regarding the incorporation of medical terms into oral sessions during the pandemic, with the aim of enhancing their lexical competence, using a questionnaire.

## **7.3 Data Collection Tools**

The present study aimed to implement medical discourse to first-year EFL learners to enhance their lexical competencies. We opted for the following data-gathering tools:

### **7.3.1 Experimental Design**

The study aimed to improve EFL learners' lexical competence by introducing medical terms to first-year learners. This was particularly important during the COVID-19 pandemic, as it allowed for the use of medical jargon in everyday conversations. The

research used an experiment design, which involved intentionally manipulating an independent variable and measuring its impact on a dependent variable, while simultaneously controlling for the influence of extraneous variables that could potentially confound the results. Participants were randomly assigned to different groups, including experimental and control groups. The experiment design was based on three pillars: randomization, which ensured that any observed effects were more likely to be attributable to the manipulation of the independent variable, and the experimental design, which included a control group that did not receive the experimental treatment. By comparing the treatment's effects to those of a control or baseline condition, the researcher can determine whether to accept or fail to accept the null hypothesis.

### **7.3.2 Classroom Observations**

Classroom observation is a crucial method for assessing teaching quality and effectiveness in medical discourse to first-year EFL learners at MKUB. The study focuses on learners' performance after treatment due to poor vocabulary and information about medical discourse, health care, and crises like COVID-19. The checklist was used to assess the development of first-year EFL learners' medical vocabulary and communication skills about COVID-19 and healthcare during and after the crisis. The observation aimed to improve understanding and communication about COVID-19 and healthcare during and after crises.

The COVID-19 pandemic impacted teaching methods, particularly in EFL classes. As a result, incorporating health and medicine-related topics is now seen as essential for enriching students' vocabulary and improving their communication skills. First-year EFL learners engage with diverse topics in oral expression, which include exposure to various

texts and videos. This helps expand their vocabulary on different subjects in general and medical and healthcare topics in specific.

The study utilizes classroom observation and checklists to collect live data from first-year EFL learners. The researcher interprets results and provides helpful feedback, guiding them through well-elaborated checklists to ensure a clear understanding of what to look for in their presentations during the assessment process.

### **7.3.3 Checklist**

The study focuses on enhancing EFL learners' lexical competence during the COVID-19 pandemic using medical discourse. A checklist was adopted to improve research efficiency and ensure completeness. The researcher observed six main aspects: poor communication, confusion, difficulty using words in sentences, vocabulary usage from videos and articles on Moodle, online debates in chat rooms, and self-confidence during pandemic-related topics. The checklist allowed the researcher to understand the behaviour being studied as it happens, allowing them to understand the classroom behaviour. The study aims to improve research efficiency and accuracy.

### **7.3.4 Questionnaire**

The researcher conducted a semi-structured post-experiment questionnaire for first-year EFL learners to assess their perception of medical discourse implementation during the COVID-19 pandemic and its impact on social interaction.

The questionnaire was divided into six closed-ended questions and a Likert scale, with respondents rating their agreement or disagreement with certain items related to medical discourse and COVID-19. The questions focused on participants' vocabulary produc-

tion abilities, comments on introducing medical discourse, the need for new vocabulary pre-pandemic healthcare interests of EFL learners, feedback on introducing medical discourse, and self-assessment of lexical competence development by the end of treatment.

## **8 Structure of the Thesis**

The research work is presented in four chapters with a general introduction, conclusion and appendices.

The first chapter is entitled *Medical Discourse in EFL Classes during the Pandemic*. It explores the impact of COVID-19 on EFL learners' medical discourse and communication, focusing on the development of Medical Lexical Competence (MLC) and the challenges of online and blended learning. It examines how medical discourse is taught, acquired, and applied in EFL classes during this unprecedented time.

Chapter two is entitled *Measuring Medical Lexical Competence*. It discusses various English language concepts, including general English versus ESP, lexis, vocabulary, collocations, and medical lexical competence (MLC). It also discusses theories on acquiring medical terms and developing MLC in EFL classes. The importance of measuring MLC is highlighted, along with techniques for creating tests. The chapter also discusses the pandemic's use of online and blended learning platforms in higher education.

Chapter three is entitled *Research Methodology*. It discusses that the study uses pre-test and post-test measurements, normality tests, and Shapiro-Wilk tests to ensure validity and reliability. The chapter also details the pilot study design and procedures, classroom observation, and checklist criteria for reliability, validity, and credibility. The chapter justifies each test's purpose and limitations to avoid misleading interpretations.

Chapter four is the last one, entitled Data Analysis and Interpretation of the Results. It presents research results from descriptive statistics, T-tests (paired and independent), post-experiment questionnaires, and classroom observations. The results are encoded in tables using the SPSS program, and interpretations are stated using paired and independent sample procedures. Post-experiment questionnaire results are also encoded for interpretation and discussion.

# **Chapter One**

## **Medical Discourse in EFL Classes during the Pandemic**

# **1 Medical Discourse in EFL Classes during the Pandemic**

## **Outline**

Introduction

1.1. General English (GE) Versus English for Specific Purposes (ESP)

1.2. English for Medical Purposes (EMP)

1.2.1. Language as a Tool for Rapport and Reference

1.3. Discourse Analysis (DA)

1.4. Medical Discourse

1.5. Approaches to Medical Language

1.6. Medical Lexical Competence (MLC)

1.6.1. The Importance of Lexical Competence for EFL Learners

1.6.2. The Importance of Medical Lexical Competence for EFL Learners

1.7. Second Language Acquisition (SLA) Theories

1.8. Alternative Approaches to Second Language Acquisition

1.8.1. The Sociocultural Theory

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1.9. Developing Medical Lexical Competence in EFL Classes during the COVID-19 Pandemic

1.10. Online Learning Versus. Face-to-Face Learning during the COVID-19 Pandemic

1.10.1. The COVID-19 and the Transition to Online and Blended Learning

1.10.2. Challenges of E-Learning during the COVID-19 Pandemic

1.11. Pragmatics in Medical Discourse

1.11.1. Applying Pragmatics (AP)

1.11.2. Levels of Application: Micro- and Macro-Processes

1.11.3. Speech Act Theory

Conclusion

## **Introduction**

The COVID-19 pandemic has touched everyone's lives, particularly teaching. For that reason, the purpose of the present chapter is to shed light on the importance of medical discourse to EFL learners and its effects on their communication. That is, the outbreak of COVID-19 has introduced new jargon and terminology associated with the virus. It delves into the intersection of medical discourse and EFL instruction during this unprecedented time, focusing on the development of Medical Lexical Competence (MLC) and the challenges posed by the shift to online and then blended learning. It explores how medical discourse is taught, acquired, and applied in EFL classes during the COVID-19 pandemic.

### **1.1 General English (GE) Versus English for Specific Purposes (ESP)**

The area of English Language Teaching (ELT) saw a remarkable shift in several nations. Basically, they have made a significant transition from teaching General English (GE) to teaching specialized English. Because of this, English has become an integral part of many countries' educational programs, serving a variety of functions. According to Kennedy and Bolitho (1984, p. 1), the increasing recognition of English as a global lingua franca has resulted in a greater focus on teaching ESP as a means to enhance language ability and cater to learners' specific requirements.

ESP has evolved as a contemporary trend in ELT to address the diverse learning requirements and objectives of certain learners in academic and professional contexts. The goal of ELT is to help learners acquire the linguistic competence necessary to succeed in a variety of occupational contexts (Assassi & Rouaghe, 2024, p. 15). Many industries,

including politics, business, education, and medicine, have shifted to using English as their primary language in recent years (Crystal 2003).

Over the years, both academics and practitioners have worked to refine the concept of ESP. According to Robinson, the relationship among language, pedagogical approaches, and the particular interests or specialized domains of learners are three essential cornerstones of ESP (1991, p. 1). Moreover, according to Basturkmen, it involves equipping learners to utilize English in academic, professional, or occupational settings (2006, p. 17). As the relationship between the three foundations discussed earlier evolves, so too does the meaning of ESP.

ESP is primarily concerned with teaching students the language skills necessary to carry out well-defined activities in a given setting, such as medical, engineering, or commercial settings. The goal of ESP instruction is to prepare students for specific demands in the workplace or the classroom, as opposed to the more generalized GE. By keeping these outcomes in mind throughout the planning process, we can guarantee that the training will be effective, practical, and relevant. This strategy maximizes the value of language acquisition by integrating it closely with the learner's specific objectives.

Widdowson argues that ESP centres on the idea that students may achieve their objectives if they work on developing the abilities that would be required to get there (1983: 6). In his view, ESP is a training operation aims to give learners with limited competence so that they can cope with specific, clearly defined tasks. These assignments represent the precise objectives that the ESP course is intended to achieve. The route, thus, explicitly acknowledges final goals. (1983, p. 6). For Widdowson, ESP is a specialized method of teaching English that aims to meet students' unique language requirements based on their

chosen careers. By analyzing students' needs, emphasizing authenticity and specificity, and employing learner-centred and task-based methods, ESP courses deliver tailored, effective, and efficient language training (Assassi & Rouaghe, 2024, p.19).

We may understand from the above quote that students who enroll in an ESP course are better able to meet the demands of their academic or professional pursuits. Hence, we try through the present research work to provide first-year EFL students with rich and effective medical terms related to COVID-19 in order to help them communicate well and avoid any ambiguity when talking about the pandemic, virus, or treatment. This step is considered an important phase in introducing medical terms and shedding light on the importance of medical discourse. We also want to show them the importance of integrating medicine within EFL classes, which bridges effective communication among people during the pandemic.

English as a Restricted Language, Academic and Occupational English, and English with Specific Topics were the three primary types of ESP identified by Carter (1983). Presented by Hutchinson and Waters (1987) as the "Tree of ELT", ESP is subdivided into three subfields: EST stands for English for Science and Technology, EBE for English for Business and Economics, and ESS for English for Social Studies). According to Jordan's research (1997), these subject areas can be further subdivided into EAP (English for Academic Purposes) and EOP (English for Occupational Purposes). According to Hasan et al. (2016), the EST branch's "English for Medical Studies" and "English for Technicians" serve as examples of EAP and EOP, respectively.

However, for Robinson (1991), ESP is a course planned for adult learners in classrooms with the same constituent elements applicable to their occupation. They learn for

a restricted period dictated by their requirements and needs. Using Robinson's definition may facilitate our attention to EFL learners' needs concerning medical discourse and lexical medical knowledge during the COVID-19 pandemic.

Developing EFL learners' medical discourse and medical lexical competence is especially important during the COVID-19 pandemic, but ESP is meant to help students who want to use English in a specific field, so it is important to carefully consider their goals and needs before implementing it. The global health crisis underscored the urgent need for healthcare professionals to communicate effectively in English, the dominant language in medical research, international guidelines, and cross-border collaborations. Hence, EFL teachers can choose suitable resources and approaches, as well as the design of courses to implement effective activities and instructional strategies.

The goal of the ESP method of teaching English is to meet the unique linguistic requirements of students enrolled in various academic and occupational programs. By analyzing student requirements, emphasizing authenticity and specificity, and employing learner-centred and task-based methods, ESP courses deliver efficient, effective, and tailored language training.

## **1.2 English for Medical Purposes (EMP)**

EMP is a specialized branch of ESP that focuses on equipping healthcare professionals and students with the language skills needed for effective communication in medical settings. According to Riabtseva and Arestova (2006, p. 196), the introduction of contemporary languages into the university curriculum was heavily impacted by the need to gain academic legitimacy. Over the years, English has established itself as the *de facto* language of business on a global scale. Not only that, but English has surpassed

all other languages as the official language of print media worldwide. More than 66% of the world's scientists and professionals read and write in English, 80% of all internet content is in English, and 80% of the world's 40 million internet users speak English at least occasionally (Molhim, 2011).

It is well-recognized that EMP is a subset of ESP. The unique medical discourse within EMP sets it apart from other sub-branches. Gyls and Wedding (1983) claimed that a specific vocabulary used in medical discourse helps to accomplish communication goals in healthcare settings. However, medical discourse is about much more than just a set of words and phrases. Scollon and Wong Scollon (2001) note that in order to learn EMP, one must first cultivate a discourse system. This system is defined by its philosophy, socialization methods, distinctive discourse forms, and prescription of face-to-face relationships. There is a distinct language system for each profession and organization.

Students in EMP programs are not only learning a new language; they are preparing for careers in highly specialized disciplines where the English language has a unique and important role. They need to hone their performance abilities and learn how to navigate and engage in these groups' professional discourse if they want to be fully involved. Just like ESP, EMP gets students ready to join the secondary discourse; when they join the academic, professional, or workplace discourse groups, they bring their own unique and ever-changing communication styles with them. One way to look at EMP students is as potential members of discourse communities. They must develop their performing abilities if they want to take part. (Popa, 2013, p. 18). He emphasizes the significance of contextualized language instruction in equipping the students to not only comprehend technical jargon but also communicate and participate in their respective areas' activities. While EMP students must become fluent in medical terminology, it is just as essential that

they learn to utilize that language effectively in a variety of professional contexts, such as when interacting with patients, doing research, or communicating at work. Becoming fluent performers requires not just learning the language but also absorbing the values, customs, and expectations of these groups.

As a result of the COVID-19 pandemic, misunderstandings and communication breakdowns among EFL learners were brought to light. Everyone from academics to public health communicators has to know how to use proper medical terminology. During the crisis, it became critically important for EFL learners, particularly those working in medical settings, to be able to comprehend and apply medical terminology in order to provide good treatment, communicate effectively, and make sound decisions. During the pandemic, some people needed help keeping up with the sophisticated and frequently technical terminology since they had already learned EMP abilities.

Understanding medical terminology was essential for many non-healthcare EFL learners as they navigated the epidemic. This was true for gaining access to healthcare, comprehending public health recommendations, and communicating with others about the virus; if they want to be successful in health-related conversations, whether as professionals or educated citizens, EMP and EFL learners need to have a solid grasp of medical terminology.

As the COVID-19 epidemic has shown, medical lexical competency is crucial for EMP and EFL students. All of these students have a common need: to communicate effectively in their personal and professional lives by mastering medical language. Learners can be better prepared to handle health-related conversations in their personal and professional lives if EFL classes prioritize context-based learning, use specialized terminology,

and include EMP approaches.

### **1.2.1 Language as a Tool for Rapport and Reference**

In the past few years, we have witnessed a remarkable rise in the study of medical discourse. Many famous linguists and researchers have dealt with this topic from different angles. To provide one example, Waitzkin (1989) explores the critical theory of medical communication by looking at the ways in which social control and ideology impact the dynamics of doctor-patient relationships. His research shows that patients' experiences with healthcare providers might be affected by linguistic biases that reflect power disparities.

Poirier and Brauner (1988) examine in detail how everyday medical speech can affect perceptions and ethical decision-making. Their research stresses the significance of being careful with one's language choices to guarantee ethical communication in healthcare. Wilce's (2009) examination of medical discourse further demonstrates how language shapes meaning and identity in healthcare settings. To better understand how communication affects healthcare outcomes and patient experiences, his research elucidates the particular language traits and practices that define medical discourse.

These studies demonstrate how intricate medical discourse is and how it affects patient care, implying that good communication is key to building rapport, mutual understanding, and teamwork between doctors and their patients. Improving healthcare delivery and patient happiness may be achieved through the practical consequences of studying language in medical contexts, which goes beyond just an academic exercise. Researchers hope that better health outcomes will result from their efforts to improve communication techniques by studying the subtleties of medical discourse.

There are many authors published their works tackling an important area of research which is related to the present work. For instance, Waitzkin (1989), in his article, offers a critical theory of medical discourse. He believes that healthcare personnel use medical language as a tool to exert authority over their patients, rather than as a neutral venue for exchanging knowledge. Poirier and Brauner (1988) investigate the language used by healthcare workers on a daily basis and how it relates to ethical considerations in medicine. The authors state that the way doctors and patients talk to each other during medical appointments shapes their relationships and has major ethical consequences. Wilce (2009) examines the language and communication practices used in medical settings. He argues that medical discourse is a complex and multifaceted phenomenon, shaped by a range of social, cultural, and institutional factors, and many others.

### **1.3 Discourse Analysis (DA)**

An important part of medicine is the discourse that establishes relationships within the profession. Understanding and using medical language is crucial, and it also has great anthropological relevance.

Discourse analysis (DA) grew in different disciplines such as linguistics, semiotics, psychology, anthropology and sociology. DA studies the relationship between the language and the context used (McCarthy, 1991, p. 5). The author goes back to Zellig Harris (1952), who was interested in the connections between the text and its sociocultural context (p.5). In other words, Harris focused on the distribution of linguistic features throughout extensive texts and the connections between the text and its social context (McCarthy, 1991, p. 5).

The birth of Sociolinguistics comes as a result of the criticism Chomsky received

at a conference at the University of San Francisco for the fact that he undermines the impact of society on language as far as context is concerned. Hereby, “the birth of new approaches to language study, namely “Discourse Analysis”, “Speech Act Theory” and “Functions of Language” (Ayadi & Aggoun, 2011, p. 1).

The anthropological importance of medical discourse is underscored by its fundamental position in the practice of medicine and its function in building connections within the profession. Therefore, it is necessary to understand and use medical language. According to Ormrod (1999), learning is characterized by a relatively permanent change in behavior or mental associations. Therefore, in order to become an expert in medical discourse, one must constantly expose oneself to new information and practice communicating effectively in medical settings.

#### **1.4 Medical Discourse**

Discourse is a vital aspect of medicine, with profound anthropological significance, as it builds relationships within the field. This emphasizes the importance of understanding and utilizing medical discourse.

There are two crucial components of medical discourse, according to the Encyclopedia of Language and Linguistics (2005): oral and written. In contrast to the latter, which deals with medical scientific “research articles” (p. xxxii), the former discusses problems with doctor-patient communication. Medical conferencing, mental interviews, illness narratives, and specialty encounters are all examples of oral medical discourse, according to the author’s introduction, while written medical discourse is used to “analyze the socio-historical construction of medical discourse and the evolution of the socio-pragmatic phenomenon of hedging” (2005, p. xxxii).

The goals of a medical interview are threefold: first, to establish a trusting relationship between the doctor and patient; second, to facilitate the exchange of information between the doctor and patient; and third, to lay the groundwork for the doctor to make informed medical judgments (Hyden & Mishler, 1999, p. 175).

As cited by Kuipers (2012), medical discourse has seen tremendous growth in popularity over the last few years. Research on shamanic chanting, “biomedical knowledge”, hospital admittance forms, and literature for divination are now all lumped together under this one word. Numerous academics, including linguists (Labov & Fanshel, 1977), health care providers (Cassell, 1985), sociologists (West, 1984), and cultural historians (Foucault, 1973 [1963]), have taken an interest in this flag (Kuipers, 2012, p. 100).

During the COVID-19 epidemic, everyone from healthcare providers to the general population had to know medical jargon. Because medical language encompasses both scientific and social areas, it is essential to acknowledge this interdisciplinary approach while teaching EFL learners medical terminology. As the epidemic became more real, it became more important to teach medical terminology and ideas to EFL learners, particularly those from countries where English is not the native language. As concepts such as “quarantine”, “isolation”, and “herd immunity” gained substantial cultural and societal significance, it became equally crucial to comprehend the social context of medical terminology as it was to understand their literal definitions.

There is more at play than just language and academia when considering the “linguistic turn” in medical social science. By definition, a discourse-based approach is interested in health-related careers and, by extension, in the evolution of science as a whole. Rather than viewing medical practice as a utilization dispensation of unmediated, diffuse

wisdom and disinterested scientific truth, describing medical knowledge and interactions as “discourse” implies an emphasis on medical authority as a socially and conventionally produced good, which is problematic in light of the fact that public trust in medical professionals is dwindling and alternative health approaches are gaining traction (Starr, 1982; As cited in Kuipers, 2012, p. 100).

The media, academic journals, government departments, and public health organizations all contributed to the medical discourse that changed during the epidemic. In order to join in on the worldwide discussions around the epidemic, EFL students began to study medical terminology. Therefore, to make medical terminology more approachable and relevant for students, teachers are requested not only to emphasise the words’ literal meanings but also their practical applications. The recent COVID-19 pandemic proved that medical vocabularies require comprehension of both scientific terms and their practical applications in the delivery of advice, the description of therapies, and the implementation of public health initiatives.

While doing our research, we were still looking for a precise definition of the term medical discourse, but some researchers have dealt with the subject in their study. They have explored the term in their works in order to give readers ideas about it. In his most expansive definition, Wilce defines medical discourse as “discourse in and about healing, curing, or therapy” (2009, p. 199), expressions of pain, and associated linguistic ideologies (p. 199). According to him, a physician’s conversation with a patient is known as medical discourse. This type of discourse is considered to assist in inconsistent therapeutic teaching, healing practices, and relations of specialists in and past specific mending experiences.

The perception of medical knowledge within social science has transitioned from an unquestionable “God’s truth” to a construct that is socially generated and symbolically conveyed, prompting inquiries on power and authority in the negotiation and regulation of that knowledge. Recent work has examined the function of discourse in structuring these processes; however, it has predominantly taken a sociological approach and must incorporate a holistic and culturally oriented view on language as articulated by anthropologists. Comprehending the formation of divergent responses about the function of speech in medical authority systems is essential (Kuipers, 2012, p. 100).

The study of medical discourse has three main views: one that views language as a practical tool for accessing a healthcare community, the second that develops a sophisticated social theory linking social differentiation, power, and language, and the third that describes interactions rigorously. The first approach views language as a practical tool for accessing a healthcare community, while the second approach develops a social theory linking social differentiation, power, and language but often overlooks the situated realities of day-to-day interactions. The third approach aims to describe interactions holistically across contexts, times, and institutional settings (Kuipers, 2012, p. 100).

The study of medical discourse has three approaches. The first approach sees language as a practical instrument for accessing a healthcare community. The second approach creates a complex social theory relating to social distinction, power, and language. It builds a social theory that connects social distinction, power, and language but frequently ignores the contextual reality of day-to-day interactions. The third approach rigorously describes interactions that seek to represent interactions holistically across contexts, time, and institutional settings (Kuipers, 2012, p. 100).

Within the COVID-19 context, it is important to note that medical discourse is multifaceted and interconnected and comprises more than simply a collection of discrete phrases. The best way to prepare EFL learners to deal with real-life health situations during and after a pandemic is to teach them medical terminology in a way that combines linguistic knowledge with an awareness of cultural and social ramifications. EFL teachers can achieve the best results with learners when they take into consideration that medical discourse research has three primary views: one views language as a tool for healthcare, the second links language, power, and social differentiation, and the third provides a detailed description of interactions, considering the contextual reality of actual encounters and their historical, contextual, and institutional aspects (Kuipers, 2012, p. 100).

### **1.5 Approaches to Medical Language**

Over the past years, many researchers have published their studies on doctor-patient interaction, for instance, Anspach, R (1989), Dale, Weinman, J and Williams, S (1998), Maynard, D. W and Heritage, J (2005), Ritz, S. A (2014), Kazantzidis, G (2018), and many others. The findings of these studies have paved the way for the present research work to tackle the same area of study, which is medical discourse and lexical medical knowledge in EFL classes during the COVID-19 pandemic, but from a different angle. In our study, we tried to involve medical discourse with EFL students to help physicians better communicate during the pandemic using appropriate and correct medical terms related to viruses, vaccination, and treatment. According to Anspach's article, the findings which have emerged from recent studies show that hierarchically according to Drass (1983) and Fisher (1979), West (1983), and Mishler (1985), medical interviews are structured as a socially structured speech exchange system, with phases that include

provider-initiated questions, patient responses, and an optional comment by the physician (1989, p. 1). Anspach highlights that medical interviews are structured communication systems, with the provider controlling the flow through questions, the patient responding, and the physician offering optional comments to reinforce authority. According to the literature that Anspach has depended on in his article, the doctor exercises strict control over the medical discourse by asking pertinent questions and simultaneously limiting the patients' ability to ask more inquiries. Furthermore, he maintains that the setting determines the content of medical discourse. In addition, Anspach agrees that the patient's worries, views, and private life should take precedence over medical discourse (1989, p. 2). We may argue that patients feel more at ease and are better equipped to communicate their condition or disease if doctors center the consultation on the aforementioned topics. The quality of patient treatment might be severely jeopardized if medical interview becomes a type of repressive communication (1989, p. 2).

Medical interviews as structured, hierarchical speech exchanges can be closely linked to the communication challenges during the COVID-19 pandemic, particularly in non-English-speaking communities, in several ways. During the COVID-19 pandemic, EFL learners faced unique challenges due to the structured, hierarchical nature of medical interviews. The complexity of medical discourse, especially in high-stress situations, made communication difficult. EFL learners often struggle with specialized vocabulary, such as the medical and scientific terms frequently used during the pandemic. EFL learners found it challenging to respond accurately or ask clarifying questions. During COVID-19, this could have led to misunderstandings about symptoms, testing procedures, vaccination, or health guidelines, putting EFL learners at greater risk of misinformed health decisions.

COVID-19 brought attention to the importance of including health-related terminology or medical English in language programs, especially during emergency situations. Medical terminology, organized medical interviews, and the expression of symptoms or worries in English are all components of health-related communication that EFL learners must master. Incorporating role-playing or simulations into the curriculum might help EFL students feel more at ease during medical interviews. By explaining their symptoms and responding to the physicians' queries, students may practise speaking English in this exercise. During public health emergencies like the COVID-19 pandemic, this would make people feel more at ease when they visit real healthcare facilities.

Problems with language, cultural differences, and specialised medical terminology were only a few of the obstacles that EFL students faced during the COVID-19 organized medical interviews. Although language access programs have been beneficial, more individualized communication tactics are required to enable EFL learners to successfully traverse healthcare systems, particularly in times of global health emergencies. Not only does language assistance play a role in enhancing medical discourse in EFL situations, but so does a heightened awareness of cultural differences and an effort to level the power dynamics that exist within medical discourse.

## **1.6 Medical Lexical Competence (MLC)**

It has long been acknowledged that medical terminology is a unique, structured system, with phrases from Latin and Greek used to define and describe the human body in health and illness. In medical school, medical students may pick up a new language. However, it is a generally acknowledged custom to learn how to spell and pronounce longer words correctly (Khan et al., 2016).

In his work, Kuipers (1989) asserts that the prevalent image of medical knowledge in social science has evolved from impregnable “God’s” to something socially generated and symbolically mediated, which raises problems about power and authority surrounding the negotiation and control of that knowledge (p. 100). Kuiper indicates an important change in social science’s understanding of medical knowledge. In the past, medical knowledge was frequently perceived as objective, perfect, and coming from a higher, nearly divine authority (referred to as “God’s”). This viewpoint saw medical knowledge as unquestionable and absolute. The modern perspective acknowledges the social construction and symbolic mediation of medical knowledge, nevertheless. This indicates that rather than being in a vacuum, medical knowledge is molded by social, cultural, political, and economic influences. It recognizes that different social actors and institutions have an impact on the production, sharing, and application of medical knowledge and that these processes entail power dynamics.

The COVID-19 pandemic highlighted the significance of social variables, power dynamics, and symbolic mediation in the production and perception of medical knowledge, hence providing a dramatic illustration of this change. This supports Kuipers’ quote when he claims that medical knowledge is influenced by society and is not infallible. That is, the COVID-19 pandemic swiftly evolved due to the emergence of new data, showcasing the dynamic nature of medical knowledge. In addition, public behaviour and policy compliance were greatly impacted by the way information regarding the virus, how it spreads, how to prevent it, and how to treat it was disseminated. Moreover, political and economic factors influenced decisions about lockdowns, vaccination distribution, and public health initiatives. Based on their distinct socio-political situations, several countries and regions have implemented a variety of strategies to prevent the spread of Coro-

navirus. Furthermore, social media's contribution to the dissemination of false and true information around COVID-19 highlighted the symbolic mediation of medical knowledge.

According to Mol, health care is much more than only the doctor-patient relationship. It is a well-established fact: the practice of medicine is inherently social, and the relationship between knowledge, power, science, and society is intricate (2002, pp. 61- 62). He emphasizes how medicine is now seen as a complicated, socially embedded profession rather than just a private consultation between a physician and a patient. This viewpoint emphasizes several important aspects regarding the character of modern medicine. First, medicine is a social endeavour. Second, the interconnection of knowledge and power. Third, implications for medical practice. And finally, interdisciplinary collaboration. Mol highlights a change in perception of medicine from a personal, goal-oriented profession to a multidimensional, socially engaged enterprise. It highlights how crucial it is to take social, cultural, and political aspects into account while practicing medicine. It recognizes the complex interplay that exists between science, society, and power in the development of healthcare. This viewpoint supports a more all-encompassing, egalitarian, and socially conscious approach to medicine.

Medical lexical competence is the ability of healthcare workers, medical students, or anybody else working in the medical area to comprehend, apply, and convey medical language effectively. This proficiency is essential to guaranteeing correct documentation, communication, and comprehension of medical principles and procedures.

### 1.6.1 The Importance of Lexical Competence for EFL Learners

A global pandemic has been ongoing since December 2019 due to the COVID-19 outbreak. New terminology, data, and ideas on diseases that have not been present in recent human history have been introduced with the unexpected epidemic. As a result of the COVID-19, many EFL students have found it difficult to compose an appropriate response to a health care or crisis-related issue (Benzida & Chelli, 2022, p. 1008).

The medical industry significantly impacts our daily lives, whether through reading books and journals, watching TV and radio broadcasts, or having family members with health issues. However, the mere fact that this information is available does not ensure that it is understood correctly, particularly by laypeople like patients. The medical industry frequently employs extremely sophisticated terminology, and laypeople sometimes struggle to understand it (Grabar et al., 2014, p. 11).

However, Bozkurt et al. (2022) note that research in the social sciences, the humanities, and education that addresses the pandemic's impacts is noticeably lacking (p. 883). It makes sense that during the epidemic, epidemiology, public health, and the financial consequences received the majority of attention. Numerous studies looking at the virus itself, possible treatments, the creation of vaccines, and strategies for economic recovery followed. Schooling was severely disrupted, with curricula changing, distance learning becoming more prevalent, and varied effects on students' academic performance and mental health. To evaluate these developments and create plans for closing educational gaps, research is required. Significant differences in access to technology were brought to light by the shift to online learning, which had an impact on students' learning results and experiences.

However, there were also significant upheavals in the humanities, social sciences, and education that need careful examination. The pandemic had a major impact on these fields, which study human behaviour, society, societal norms, and learning processes. Health literacy (HL) has a significant impact on both individual health outcomes and the sustainability of healthcare systems. As a result, fostering awareness through good health communication between experts and the public is vital (Popa et al., 2023). They also claim that teaching health literacy has gained a lot of attention recently as a consequence of the COVID-19 pandemic. The capacity to obtain, comprehend, evaluate, and disseminate health-related information is known as HL. HL significantly impacts individual and social health. In fact, those who have limited HL are more likely to experience challenges when trying to get and utilize healthcare services (Popa et al., 2023).

Popa et al., (2023) insist on training students on HL since their study shows that healthcare providers may benefit greatly from training to enhance their attitudes and abilities, particularly when it comes to communicating with patients who have low HL. Training appears to do double duty: it raises professionals' sensitivity to patients' needs and gives them the language skills to simplify otherwise difficult concepts for their patients. This promotes a more patient-centered approach to treatment by allowing patients to actively participate in their own healthcare management and improving patient outcomes through shared decision-making (Popa et al., 2023). The authors emphasize how training benefits aspiring medical professionals, particularly in terms of enhancing their capacity to interact with patients who lack health literacy (HL). Following their training, these professionals showed a better understanding of the needs of their patients and improved their ability to communicate information understandably. Improved communication facilitates collaborative decision-making and aids in patient self-care, which eventually improves

healthcare results.

Everyone was worried about how the COVID-19 pandemic would affect education in the future, and in order to stay afloat in the new educational environment, educators and students alike had to adopt new pedagogical practices (Bozkurt et al., 2022, p. 883). They claim that COVID-19 impacted people and the educational system on "two thematic clusters emerged: (1) the effects on schooling, emergency remote learning opportunities, and school continuity; and (2) the mental health consequences of the COVID-19 pandemic (p. 883). The authors highlight the impact of COVID-19 at the level of education and psychology. We try to clarify the impact of COVID-19 at the level of education according to the nature of the present research work. They shed light on three basic points: first, educational response; second, emergency remote education affordances; and third, continuity of education. The first element means how educators and educational institutions handled the difficulties posed by the COVID-19. The methods, modifications, and inventions used to go on providing education in spite of interruptions are highlighted. The second element, which refers to the opportunities and resources that emergency remote education (ERE) offered during the epidemic, is highlighted in this section. ERE, in contrast to typical online education, was a swift transition to online platforms to guarantee that learning could go on even in situations when in-person learning was not feasible. By the third element, Bozkurt et al. refer to the measures taken to guarantee that the education of the students was not disrupted. This entails preserving student engagement, keeping learning resources accessible, and modifying the curriculum to accommodate the new distribution method.

Integrating medical language into the EFL curriculum has many advantages. The most important ones are listed below: first, it enhances abilities in self-advocacy and

health literacy. Second, it improves comprehension and accessibility of medical information. Finally, it provides better training for occupations in medical or allied professions.

### **1.6.2 The Importance of Medical Lexical Competence for EFL Learners**

The oral production in an EFL class is a challenging task that requires certain linguistic skills and strategic ability. Lexical competence is essential in interactive environments. However, EFL learners are not producing enough spoken language in the classroom when asked to tackle topics related to health care, COVID-19, and the pandemic. The reason behind this issue goes back to the deficiency of medical terms that EFL learners suffer from.

As cited in Gotti (2015, p. 10), health information is widely disseminated through the media via radio, television, newspapers, magazines, and the Internet, offering a steady and easily available supply of guidance and information about health care. The media uses channels designed to reach certain audiences, such as publications aimed at men, women, or teenagers, in order to fulfil its informative and educational role of achieving all kinds of people of all ages (Kay, 2006). Patient information leaflets (PILs) are a type of medical discourse that has drawn a lot of attention from linguists lately. PILs are writings that are included in product packaging to help patients take their medications as prescribed. While both national and international levels have issued instructions and standards for PILs, they often address the content to be provided rather than the format to be used. As a result, pamphlets that are distributed in several languages and nations may include significantly different information regarding the same medication. This kind of variance frequently results from certain document design choices that are influenced by the national culture of the nation where the PIL will be made accessible (Gotti, 2015, p. 12).

It is important to highlight that the COVID-19 pandemic underscored the importance of clear communication about medications, vaccines, and public health guidelines, with the design and style of PILs significantly impacting patient understanding and adherence.

Hence, the cultural context has a big impact on how medical information is communicated, as the statement shows. It became clear during COVID-19 that communication that was sensitive to cultural differences was required to guarantee that people from different backgrounds understood and trusted the information being given. Gotti (2015) highlights on the significance of medical discourse to be learned when he claims about PILs: They often emphasize the content to be communicated rather than the manner of its presentation. Nonetheless, substantial discrepancies may exist in the information on the same medicine across the leaflets of several countries (Gotti, 2015, p. 12). As a consequence of the pandemic, PILs that are easy to understand and comprehend have become essential due to the pressing need to spread knowledge regarding COVID-19 vaccinations and therapies. Variations in the format and style of these pamphlets may cause misinterpretations and a disregard for medical advice.

It became clear during COVID-19 that communication was sensitive to cultural differences was required to guarantee that people from different backgrounds understood and trusted the information being given. For that reason, EFL teachers were required to assist their learners in acquiring medical lexical competence, which is considered a critical skill and essential during global health emergencies like COVID-19.

## **1.7 Second Language Acquisition (SLA) Theories**

Prior to the late 1980s, L2 research focused on two famous theories: Behaviourism and Monitor Theory. Behaviourism explains how people learn by observing their actions,

rewards, and punishments. Rewards reinforce certain behaviours, while punishments result in suppression. It applied to both L1 and L2 acquisition. However, the late 1950s revolution in linguistics, led by Chomsky, and studies on L1 acquisition in infants have shown that behaviourism is insufficient to explain how children pick up new languages (VanPatten et al., 2020, p. 14).

As Behaviourism declined, L2 researchers began exploring child L1 acquisition questions. The 1970s saw a surge of descriptive studies suggesting Behaviourism couldn't account for second language learners' development. Stephen Krashen's Monitor Theory solidified in the early 1980s, was formulated by the late 1970s, focusing on L2 acquisition (VanPatten et al., 2020, p. 15). It developed our understanding of language acquisition by separating the conscious and subconscious components of language learning.

Chomsky (1965) posits that children learn their first language through cognitive learning, with an innate ability to understand language. He believes that children are born with a "language acquisition device" (LAD) in their brains, which makes language learning a natural event. This theory can be applied to gestures, as babies respond positively to their parents when they smile or laugh. Bloomfield, Sapir, Fries, Skinner, and Pavlov, members of the "Behaviourist" group, believe language learning is a process known as "operant conditioning", where learners demonstrate new behaviour as a response to rewards or punishments. Gullberg (2010) highlights the tight relationship between gestures and speech, highlighting their interactive, communicative, and internal cognitive roles (Benzida, 2017, pp. 45, 46).

Vygotsky's theory emphasizes the role of social interaction in cognitive development, with community playing a central role. His concept of the "Zone of Proximal

Development” (ZPD) distinguishes between a child’s ability to solve problems independently and those that require assistance from others. This concept has educational implications, as human learning requires a specific social nature and involves interacting with others. Vygotsky’s work is significant in semiotics, as it reveals the mental and behavioural processes of humans, including the power of non-verbal signs. Teachers should design activities that encourage students to work in groups with different levels, especially those with advanced abilities, to help less advanced students develop oral performances through interaction with others (Benzida, 2017, p. 44).

## **1.8 Alternative Approaches to Second Language Acquisition**

There has been a notable increase in SLA research. In this part, we shed light on theories that are related not only to second language acquisition but also theories of SLA that support the integration of medical discourse, i.e., they develop lexis. There are alternative approaches to L2 acquisition (SLA). The term ‘alternative’ refers to the ways in which these theories either differ from or supplement the dominant cognitivism in the field (Atkinson, 2011, p. 2). Using ‘alternative’ implies that the alternative approaches either contradict or enhance cognitivism, meaning they provide unique or additional perspectives on cognitive processes or learning mechanisms.

### **1.8.1 The Sociocultural Theory**

Based on the research of the Russian psycholinguist Lev Vygotsky, the sociocultural theory of mind (henceforth SCT) was established (1978, 1986). He insisted that any attempt to explain how the human mind evolved must include research into human history and culture. Vygotsky proposed a dialectic link between the social environment and the mind. Through the use of physical and semiotic instruments, people can alter their social

and physical surroundings, which in turn alters the people themselves and how they interact with those environments. This theory's position that the social environment is the source of mental development rather than its context sets it apart from previous theories of mind (Swain & Daters, 2007, p. 821). This theory comes in contrast to the traditional methods of understanding mental behaviour concentrate on the person and what that person is doing (p. 281). As cited by Atkinson (2011, p. 2), Doughty and Long claim that researchers acknowledge the social environment in which SLA occurs and acknowledge the potential effect of both micro and macro contexts on SLA. On the other hand, they are cognizant of the fact that, like other forms of learning, mastering a new language requires a transformation in one's mental makeup. Therefore, studies of SLA are increasingly being considered a subfield of cognitive science (2003a, p. 4). They emphasize the dual aspects of SLA, focusing on its cognitive and social aspects. That is, SLA takes place in particular social contexts that impact learning, like educational or cultural settings. However, it also entails changes in the learner's internal cognitive processes, that is why cognitive scientists are interested in it.

In connection with COVID-19, the pandemic had a major effect on language learning's social and cognitive components. The epidemic has changed where and how language learning occurs socially. Online platforms have supplanted traditional classroom environments with lockdowns and social distancing techniques, altering interaction dynamics and access to language learning tools. This change presented difficulties in sustaining motivation and engagement and affected the social backdrop of SLA.

The spread of the COVID-19 virus has introduced new concepts and terminology pertaining to the virus as well as information regarding illnesses that have not been present in recent human history. During the pandemic, learners interact with new languages by

introducing new terminology and vocabulary. The COVID-19 pandemic emphasized how social circumstances and cognitive processes in SLA are intertwined, underscoring the necessity of research addressing both aspects to comprehend and assist language learners in these atypical times.

### **1.8.2 Input, Interaction, and Output L2 Acquisition**

The interaction approach, similar to other theories of L2 acquisition, mainly focuses on the process of language learning. It makes an effort to take into consideration how language is learned through exposure to language, language production, and feedback on that language production. Put, interaction is the term used to describe the discussions in which learners take part. Engagements hold significance as they provide learners with knowledge regarding the accuracy and, more crucially, the inaccuracy of their statements. Typically, interaction researchers want to know whether certain types of interactive feedback on non-target-like forms are linked to learning by eliciting particular grammatical structures. For the present being, the interaction approach focuses mostly on the functions of input, output, and interaction in the learning process. The supplied comments on stimulated recall and the interactional feedback events ( Gass & Mackey , 2020).

Input, Interaction, and Output are fundamental concepts in L2 acquisition that characterize several aspects of language learning procedures. Three major hypotheses in SLA emphasize on the impact of context on language acquisition: the input hypothesis, the interaction hypothesis, and the output hypothesis (Liu, 2022, p. 474). Learners' present level of linguistic competence is "I" based on the input hypothesis. This provides evidence that increasing their exposure to "i+ 1" language input will improve

their language learning level. While the Interaction Hypothesis does not yet address the question of how to quantify input comprehensibility, it does provide a supplement to the Input Hypothesis. Although it has not yet addressed the question of how to measure the understandability of inputs, the Interaction Hypothesis complements the Input Hypothesis. Language input comprehension may be enhanced with the use of the engagement approaches. The interactive process is accompanied with language output. Learning a language is all about producing something useful, and that something is also a measure of how well you've learned the language. Hence, outputs serve an important role in cementing students' understanding of inputs (Liu, 2022, p. 474). Each concept supports distinct theoretical frameworks within the field of applied linguistics; these ideas together offer a thorough knowledge of how various aspects of language exposure and use contribute to second language acquisition.

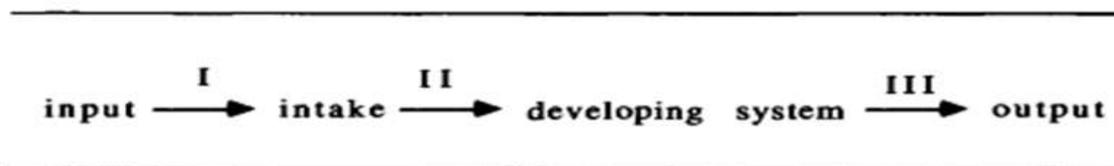
During the COVID-19 pandemic, input, interaction, and output principles can be modified by utilizing digital tools and platforms to offer clear input, enable interactive communication, and encourage the use of language actively. Teachers can effectively assist EFL learners in building their lexical competence by incorporating these principles into remote and hybrid learning contexts.

### **1.8.3 Input Processing in Adult L2 Acquisition**

Input processing (IP) emphasizes the importance of efficient input that students can comprehend and process. Teachers can create interactive grammar-focused projects or guided reading exercises to assist students in concentrating on certain language forms and their meanings. The theory also emphasizes the significance of delivering information that is understandable and pertinent to the requirements and skill levels of the learners. It

“is concerned with the situations” because acquisition is a by-product of comprehension. IP offers several assertions regarding what directs students’ processing of linguistic information in the input during comprehension activities (VanPatten et al., 2020). It means that when students work to comprehend the words they hear or read, they also pick up skills related to language usage and structure. The main focus of IP theory is on how language learners perceive and make sense of the language they come across.

Input is the primary data source for L2 learning, essential for learners to construct their language competence (Alahmadi, 2019, p. 46).



**Figure 1.1**  
*Processes in Second Language Acquisition (Alahmadi, 2019, p. 46)*

Figure 1.1 represents the model used to describe the processing of language input and how it helps with language learning. The explanation of each element and their interactions is as follows: Input is converted to intake by the first (I). Not all intake is automatically incorporated into the learned system; rather, the learner must still create an acquired system from intake. The processes that support intake accommodation and the remodeling of the emerging language system make up the second set of processes (II). Ultimately, the results of the study indicate that the ability gained is not directly reflected in the learner’s language. Therefore, we need to offer a third set of processes (III) to explain some aspects of language generation, like monitoring, accessing, regulating, etc (p. 46).

The Input → Intake → Developing System → Output model proved to be very

applicable and effective during the COVID-19 pandemic. Even in a virtual or hybrid learning environment, EFL teachers can monitor the Developing System, promote intake, offer meaningful language input, and encourage output by using digital tools, interactive platforms (Moodle), and customized feedback mechanisms. This method tackles the difficulties brought by the pandemic while preserving continuity in language learning.

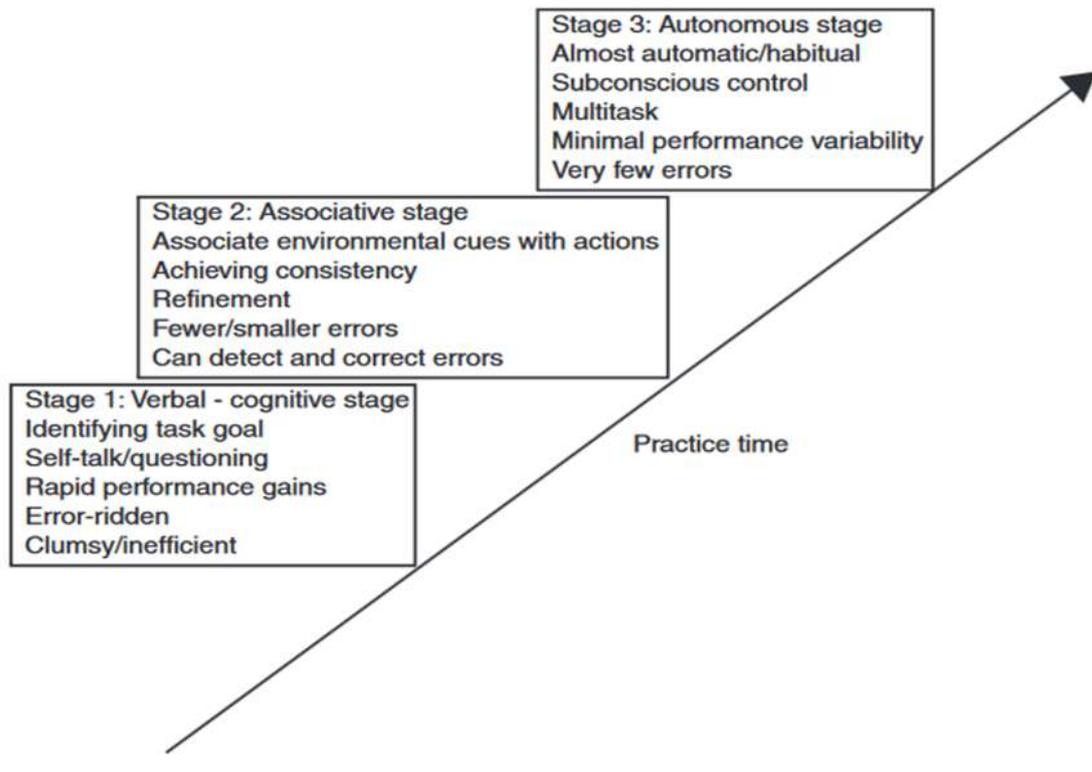
This model shows how language learning is an iterative, dynamic process. The raw data is provided by input, learners actively interact with the intake portion of the data, their growing knowledge base is the developing system, and their application of that information in real-world situations is the output. Over time, learners can improve their language skills due to the interaction between these components.

#### **1.8.4 The Skill Acquisition Theory**

The Skill Acquisition Theory is concerned with how individuals learn, use, and refine new abilities. It addresses how language learners become proficient in speaking, writing, listening, and reading within the framework of language acquisition. As cited by Taie (2014), it is a theory of learning in general, covering everything from cognitive abilities to psychomotor skills, not only how languages evolve (Mystkowska, Wiertelak & Pawlak, 2012). The theory elucidates the progression of persons from fundamental learning to advanced mastery across many skills. The scientific bases of Skill Acquisition Theory are rooted in several subfields of psychology, although this discipline has demonstrated notable resilience amongst multiple psychological advancements, notably connectionism, behaviourism, and cognitivism. The same may be stated for other recent expansions in skill acquisition research, such as the study of skill forgetting and the relative importance of massed versus scattered practice in learning and forgetting.

The prudent application of guidelines and illustrations is necessary to acquire declarative knowledge of the proceduralizable variety ( Gass & Mackey, 2020).

It necessitates efficient environmental interaction, the detection of critical information, and the timing of suitable reactions ( Warner & Kanamaru , 2018, p. 4).



**Figure 1.2**  
*Fitts' Three-Stage Model Describes Learning as a Continuous Process with Gradual Changes in the Nature of Information Processing as Learning Progresses (Warner & Kanamaru , 2018, p. 9)*

Figure 1.2 presents Fitts' model, which identifies three primary stages of language acquisition. The cognitive stage is the first stage in which the student is attempting to comprehend instructions. To complete the activity, they mostly rely on conscious thought and direction. Performance is erratic, and errors are frequent. The second stage is called the associative stage. During this phase, the student begins to hone his/ her abilities. S/ he performs more consistently and commits fewer mistakes. The emphasis switches

from comprehending the task to enhancing accuracy and efficiency. Reaching the third autonomous stage requires extensive practice. During this last stage, the ability becomes less conscious and more instinctive. The student completes the assignment quickly and well, focusing on more advanced performance elements ( Warner & Kanamaru , 2018, p. 8).

The Fitts and Posner Model can support lexical competence development, especially when adapted to remote learning and technology integration during the COVID-19 pandemic. That is, the Fitts and Posner Model remains a useful framework for researchers and educators to create lexical competency improvement plans. Let us explain how it can be applied. During the cognitive stage, teachers can create basic vocabulary courses that are organized and transparent, ensuring that students grasp new terms and their contexts, whether face-to-face teaching (in-person) or virtually. At the associative stage, They can include exercises that offer feedback and practice, such as interactive vocabulary games, spaced repetition plans, and online tests. Reaching the autonomous stage, teachers help students strengthen their vocabulary. They can encourage them to practice on their own by writing, reading, and taking part in online forums.

Every hypothesis expanded on previously held concepts or offered the refinement of pre-existing concepts, resulting in a deeper, more complex understanding of language learning. Social context is crucial for learning, as Sociocultural Theory has shown. This was expanded upon by input, interaction, and output theories, which highlighted the critical roles that output and interaction play in language learning. Input processing theory, a cognitive viewpoint to support interaction-focused viewpoints, delves deeper into how language learners process input. A more thorough understanding of SLA was made possible by the additional insights that Skill Acquisition Theory offered into the phases and

cognitive processes involved in learning language skills.

### **1.9 Developing Medical Lexical Competence in EFL Classes during the COVID-19 Pandemic**

EFL learners were in need to read medical texts in order to gain information about health, illness or medical treatment during the COVID-19 era. It is intuitive that understanding such texts requires a considerable level of medical lexical knowledge. Failure to understand can result in serious consequences.

MLC is an aspect of English for Medical Purposes (EMP) which takes into account the language learners' ability to comprehend medical texts and medical lectures. The study by Van Berkel and Gerritsen (2012) explores the influence of medical terminology and explanation on uncertainty avoidance, finding a correlation between higher uncertainty avoidance and increased use and explanation of medical terms (As cited in Gotti, 2015). Research on spoken medical discourse has also garnered considerable interest despite the traditional focus on written medical discourse. Conversation analysis is the branch of linguistics that has mostly studied oral discourse in the medical field (Bowles, 2006). Medical discourse is crucial for medical professionals and the public, as it connects the profession and the public. Medicine affects human health and lives, and society now relies on medical communication. Access to specialized discourse is now accessible to the public, and medical knowledge is subject to societal judgment. Successful communication requires considering the patient, medical student, and the general public while being aware of ethical implications and decisive factors (Ordóñez-López & Edo-Marzá, 2016, p. 1). They emphasize the importance of medical discourse on society and the increasing interest of academics in this topic, emphasizing its vital function to help close

the gap in understanding between medicine experts and the public.

The COVID-19 pandemic has grown significantly the importance of medical discourse in all societies. The exchange of knowledge and communication among physicians, nurses, researchers, and other healthcare professionals is facilitated by medical discourse. Bowles (2006) claims effective patient care and the progress of medical science depend on this internal communication. In addition, medical discourse acts as a conduit for the dissemination of medical knowledge to the general public, including patients. This link is essential for enlightening, teaching, and counselling non-specialists on issues pertaining to health.

The COVID-19 has brought with it new way of communication among people who were really interested with the virus, vaccination, treatment, and healthcare. EFL teachers were interested to develop EFL learners MLC. Hence, different method and strategies to do it because if EFL learners are effectively academic discipline and/or integrated into English speaking medical topics it means they grasped high level of MLC.

### **1.10 Online Learning Versus. Face-to-Face Learning during the COVID-19 Pandemic**

The COVID-19 pandemic pushed many higher education institutions (HEIs) in world to into remote learning; to online learning in higher education (Agormedah et al., 2020). Online education is a growing trend in universities and colleges throughout the world. This is more of a stopgap measure; the term “emergency remote teaching” better describes it (Bozkurt & Sharma, 2020; Golden, 2020).

At MKUB, teachers used the Moodle platform to post lectures and share online documents with learners. Algerian universities, in general, and MKUB, in particular, have

switched from in-person instruction to blended and online learning during this period. However, everyone, regardless of educational background or specialization in medicine, possesses adequate knowledge and terminology related to the subject. They frequently converse, discuss, and argue about issues pertaining to pandemics, viruses, vaccinations, and a host of other medical and healthcare-related subjects (Benzida & Chelli, 2022, p. 1008).

Emergency remote teaching is slightly different from distance education. As a dynamic, multidisciplinary area, distance education has successfully adapted to changing student requirements and directed open educational methods (Bozkurt, 2019a; 2019b; Zawacki-Richter et al., 2020, as cited in Bozkurt & Sharma, 2020).

Bond (2020) carried out a quick analysis of K–12 (kindergarten through 12th grade) research projects carried out during the first seven months of the COVID-19 epidemic in order to pinpoint achievements and difficulties as well as provide recommendations for the future. A study reviewed 90 publications on K-12 education, using various databases and tools like the COVID-19 live systematic map, Microsoft Academic, Scopus, EBSCOHost, and the Web of Science to compile studies on the impact of COVID-19 on K-12 education. The results showed that the majority of the evaluated research has focused on the difficulties in implementing ERE, teacher ICT abilities, parent involvement in the classroom, instructor digital competencies and infrastructure, and student's health and well-being (As cited in Bozkurt et al., 2022, p. 885).

### **1.10.1 The COVID-19 and the Transition to Online and Blended Learning**

The global spread of COVID-19 has caused disaster in nearly every industry. The only industry that has gone fully digital in the majority of nations is education. Online

education, especially at the university level, was the most effective means of continuing education during the epidemic (Mahyoob, 2020).

The last twenty years have seen the activation of online learning at a number of institutions throughout the world. The problem is that most educational institutions do not use online learning, and their employees are often confused about what it entails. Academics' familiarity with and comfort with online education has grown thanks to MOOCs or Massive Online Open Courses (Lynch, 2004). According to Mahyoob who claims that during this critical time of transition, students want extra social support to help them focus and stay motivated as they learn online (2020, p. 352).

The transition to e-learning during the COVID-19 pandemic was the only viable alternative to shift to in most universities in the world. In order to control the spread of coronavirus, most governments have implemented lockdown procedures. Mohamed Khider University of Biskra experienced the e-learning then blended learning during the pandemic. One benefit of online learning is the time, money, and effort it saves students throughout the world. On the other hand, there are some drawbacks to online learning as well.

Thanks to the great opportunity of online learning that is becoming more accessible as a result of educators' and students' increased familiarity with and use of various forms of educational technology, such as computer-based, mobile-based, and web-based learning (Pellegrini, Mirella, Vladimir Uskov, & Casalino, 2020; Byun, Sooyeon, & Slavin, 2020). Learners now are very different from those in the past, says Prensky (2001), because they grew up speaking a technology language. They spend a lot of time interacting with digital and virtual environments. Students in the modern day are active participants

in e-learning because of their contacts with a variety of technological tools (Vai, Marjorie & Sosulski, 2015; Mohalikand & Sahoo, 2020; Ko & Rossen, 2017). During times of crisis and hardship, the activation of e-learning businesses is seen as a panacea, thanks to the significance of information technology (IT) during the outbreak.

There are several reasons why the e-learning system is a valuable resource for knowledge. Its accessibility, affordability, user-friendliness, and interactive nature make it a top pick (Almiah et al., 2020, p. 5262). According to Wahas, online learning, electronic learning, or e-learning, is a term that defines the practice of replacing traditional classroom instruction with digital resources. When it comes to providing students with a learner-centred, hospitable, and interactive environment, Rodrigues et al. characterized e-learning as an innovative digital system that was built using digital technology and a range of learning resources and materials (2023, p. 44). Also, according to Zarei and Mohammadi (2021), online learning is a complex pedagogical strategy that presents new ways of teaching using a range of digital mediums; it is also open, dynamic, self-directed, and interactive. Google Classroom, Google Meet, Zoom, Webex sessions, Microsoft Teams, Telegram, and Line are just a few of the conferencing apps that professors and students can use for this kind of online learning. The widespread use of online education and other forms of contemporary technology has far-reaching effects on both students and educators in the field of English language instruction. Opportunities for language learning have been expanded thanks to the fast development of technology in the last several decades. One way that e-learning was made more engaging and effective was by adding music, visuals, and animation effects (Wijaya & Helmi, 2018, as cited in Wahas, 2023,p. 44).

“Blended learning is a mode of education delivery that combines online learning with face-to-face classroom teaching” (Sarkar, 2023). The term “blended learning”

describes a method of instruction that combines face-to-face classroom instruction with Internet resources. Through this mode, students may take advantage of online content's adaptability and accessibility while still engaging in face-to-face classroom interaction with teachers and classmates.

In order to keep classes running smoothly and in accordance with safety regulations during the COVID-19 outbreak, MKUB turned to blended learning. The course format at MKUB consisted of fifteen days of classroom teaching (face-to-face learning) followed by fifteen days of online learning on the Moodle platform. This method is based on the same ideas as blended learning, which combines the advantages of online and in-person learning. In this setting, students might use Moodle for self-paced access to course materials, discussion forums, and assignment due dates. In the midst of the pandemic, the platform allowed users to study independently with little to no human interaction. At the same time, students benefited greatly from the in-person sessions because they were able to speak with their teachers and classmates face-to-face, get feedback right away, and work together to improve their learning. The benefits of conventional classroom instruction were supplemented by the necessity of online learning through this hybrid method, which allowed students to overcome the pandemic's obstacles while still participating in an engaging educational setting. The institution was able to lessen the impact of the crisis on student participation and academic achievement by combining the two approaches.

Blended learning, which blends traditional classroom instruction and online learning, provides a more complete and adaptable approach to education. It can supplement face-to-face instruction or give an alternative for students who are unable to attend in-person sessions. Sriraman and Sundararasan (2023) summarized the major advantages of blended learning. First, it increases student engagement by allowing students to work at

their own speed while professors provide personalised support. Second, it expands access to a wide range of Internet materials, including films and interactive exercises that may supplement traditional learning. Third, blended learning increases student motivation by providing them more control over their learning experience. According to research, this methodology can result in higher academic accomplishment than traditional ways. Furthermore, the adoption of online platforms that allow students and teachers to share course materials and resources improves communication between them. Finally, blended learning provides greater flexibility, allowing students to finish coursework at their own pace, which is especially advantageous for individuals with hectic schedules. Overall, blended learning creates an interesting and effective learning environment for both students and instructors (p. 5).

By combining the best features of both settings, blended learning enables a more tailored educational experience. Learning may be done at one's own speed, with access to many materials and the capacity to use digital tools to improve comprehension due to online platforms; in our study, Algerian universities used the Moodle platform. Conversely, meeting in person allows for more beneficial, real-time conversation and social skill development, as well as fast feedback. By combining elements of both online and conventional learning, this strategy overcomes the drawbacks of each and creates a more flexible and engaging educational environment. It promotes group work in the classroom, makes room for students with different learning styles, and keeps students interested by giving them opportunities to put their online knowledge into practice.

### **1.10.2 Challenges of E-Learning during the COVID-19 Pandemic**

The Coronavirus (COVID-19) pandemic, which hit the globe in December 2019, pushed back health systems, economies, and education. The preservation of traditional knowledge has been a major obstacle to Algeria's educational system. All Algerian institutions were required by the minister of higher education to end in-person instruction in March 2020. Teachers and students were, therefore, granted access to the Moodle platform since it was thought to be the only option to guarantee that each module's curriculum would be finished and to prevent the learning process from being interrupted.

Prakash and Barathi (2023) discussed the drawbacks of e-learning in their article. One of the most significant problems is internet abuse, in which students, regardless of socioeconomic status, are given gadgets such as mobile phones or laptop computers but frequently use them for gaming or viewing improper information rather than concentrating on their schoolwork. Another disadvantage is a lack of cohesion among teachers and pupils. Unlike traditional classroom settings, online education restricts real-time conversation and interaction, impeding students' capacity to fully comprehend and participate in the curriculum. Furthermore, online education has physical effects, since prolonged screen time can strain students' eyes and harm their physical well-being. A major difficulty is the lack of attention many students face in online environments since they are typically more easily distracted and less responsible than in a traditional classroom context, resulting in frequent disengagement from lectures (p. 33). In terms of access and social inclusion, many low-income families struggle to give their children the essential technology, such as PCs or laptops, preventing them from engaging in online education. Furthermore, online education can lead to social isolation since students may grow alien-

ated and avoid real-world contacts while limited to personal areas. Furthermore, insufficient technology literacy is a barrier since only some possess the expertise or resources to properly participate in digital learning environments (p. 34).

The COVID-19 pandemic has profoundly influenced the e-learning process, particularly English language education (ELE); we focus in this study on the challenges and obstacles encountered by EFL learners in this new era. Turban, King, Lee, Liang, and Turban (2015) pointed out that while e-learning has many benefits, it also has certain drawbacks. The lack of direct one-on-one connection that characterises conventional classrooms is a major drawback. On top of that, not all teachers have what it takes to lead engaging online classes. Because of the high expenses associated with purchasing, implementing, and maintaining e-learning systems, a substantial financial commitment is also necessary.

Moreover, it can be challenging and expensive to guarantee the security of copyrighted works against plagiarism in an online setting. Finally, it is not uncommon for teachers to have a hard time keeping their learners engaged and checking that they have fully prepared for tests and assignments (p. 221). Despite these disadvantages, online education has become a popular means of instruction, highlighting the need to prioritise access to education in all forms.

### **1.11 Pragmatics in Medical Discourse**

Pragmatics, by definition, is the context-based linguistic analysis (Birner, 2013, p. 2). The notion of “pragmatics” is up to date, perhaps, did not speak about it as they doing today. Recently, researchers and linguists argued that comprehending the core concept of language necessitates an understanding of pragmatics. Pragmatics is highly relevant

in medical discourse since pragmatics deals with how context influences the interpretation of meaning in communication. That is to say, how language is used in the field of communication.

### **1.11.1 Applying Pragmatics (AP)**

The name “Applying Pragmatics” (AP) was coined instead of “Applied Pragmatics” since it indicates that AP is an activity that is dynamic and focused on the user. AP contrasts with the term “applied linguistics”, although the latter is related to language learning and teaching. The emphasis of AP is on the pragmatics, or the ways in which people really use language in everyday situations. It places a premium on the individual, group, cultural, and intellectual contexts of language users and considers them fundamental. The method focuses on comprehending the ways in which these complicated circumstances impact language usage. Fundamentally, AP emphasizes the speaker-environment interaction and how language operates in that context (Hoye, 2006, p. 406). According to Hoye, pragmatics is the examination of the user-centered aspects of language, while AP is a problem-solving endeavor that prioritizes the critical, imaginative, and constructive application of pragmatic knowledge within the real-world context of social conflict, rather than merely reiterating the principles of established pragmatic theory (Mey, 2001: 308–319; as cited in Hoye, 2006, p. 406). According to the quotation, AP is a method for solving problems in the real world by focusing on applying pragmatic knowledge to societal issues. Reflecting the way people use language in everyday situations characterized by social struggles, power dynamics, and interpersonal interactions, AP encourages learners and practitioners to engage with language in critical, imaginative, and constructive ways, rather than solely focusing on traditional pragmatic theories. Basically, it places more emphasis on practical abilities that can be used in actual communication than on

practising theoretical frameworks separately.

By moving the emphasis from theory to practice, this view of AP highlights the importance of language in solving common societal problems. By describing pragmatics as a “problem-solving activity”, the quotation emphasizes that being competent in pragmatics is about more than simply knowing the laws of language; it is also about knowing how to use those rules effectively and sensitively in everyday life. As an example, AP can be useful in medical discourse when navigating delicate topics like breaking bad news to a patient or finding culturally sensitive ways to address their concerns. Rather than relying solely on theoretical concepts, this method encourages a more dynamic and socially conscious comprehension of language, equipping students to handle the intricacies of human interaction.

On both the micro and macro levels of operation, pragmatics is relevant to the broader social agenda for a number of reasons related to its evolution and formative tendencies: In response to Chomskyan linguistics’ syntactic formalist and systemic fixation on language at the expense of language users and their contexts, there has been a “social-critical” push toward developing more socially aware linguistic practices, as seen, for instance, in the groundbreaking work of Basil Bernstein, who distinguished between limited and elaborated code. J.L. Austin’s groundbreaking work offers a fresh viewpoint on the notion of speech acts and language as action (Hoye, 2006, p. 406).

### **1.11.2 Levels of Application: Micro- and Macro-Processes**

When dealing with the level of applying pragmatics, we have to relate it to micro and macro pragmatics. Both micro- and macro-pragmatics are on a spectrum, with the two overlapping and relevant depending on the research question. The former pertains

to interactions between people and groups in their immediate environments, whereas the latter is more concerned with the everyday. The latter is related to the social contexts and institutional frameworks in which local practices take place must be considered (Hoye, 2006, p. 406).

A vital and real example of micro and macro pragmatics goes back to the analysis of the Rodney King trials as a case in point. Rodney King, who was subjected to a violent beating by police officers then arrested for a traffic violation in Los Angeles. The event was filmed by a photographer and later broadcast on public television to public outrage.

The courtroom proceedings, as a communicative event, can only be understood in the context of the institutional and social factors that shaped them. These factors include: the typical structure and roles of participants in a U.S. courtroom and legal/trial setting; the social status of African-Americans in American society, both then and now, as exemplified by King; and the role of community and civil rights leaders, who used the King case to highlight racism and police brutality (Hoye, 2006, p. 406).

Pragmatics at the micro-level can only be fully understood when viewed against the backdrop of larger societal forces that shape interactions. Hoye emphasizes how macro-pragmatics connects individual acts of communication to larger social battles and historical histories, giving it an essential framework for comprehending complicated, real-world events. Researchers might unearth the underlying meaning of common communication actions by locating them within their institutional and cultural settings, particularly in high-stakes circumstances such as court procedures. In order to maintain clarity and sensitivity, clinicians had to adjust their speech actions (e.g., advise, reassurance, directions) during the pandemic, since there was a surge in communication with patients

from diverse cultural and linguistic backgrounds. To effectively manage the emotional components of the epidemic while providing factual facts, one must possess pragmatic competence.

### 1.11.3 Speech Act Theory

The Speech Act Theory was originally proposed by J. L. Austin and further advanced by J. R. Searle. Austin's lecture series (1955), subsequently published as "How to Do Things with Words", suggests that individuals may accomplish things via the use of words. They are in agreement that words have many other purposes beyond only describing and imparting knowledge. However, it is used to perform acts and things. Speech act is the actions performed via utterances, i. e., without the utterance the action is not done. Actions like apologizing, complaining, promising, complementing, and requesting can be executed through utterances. Austin defines a speech act as an action executed by a speaker through an utterance to convey meaning to listeners. Communication consists of a sequence of communication or speaking activities. Speech acts are the fundamental functional unit in communication, encompassing instructions, inquiries, and assertions (Austin, 1962, p. 17-22). Austin took a significant step in elucidating the link between utterance and action by proposing the idea of speech act.

Yule (1996) claims that actions executed by utterances are typically referred to as speech acts and are often designated with more precise terms in English, like apology, complaint, appreciation, invitation, promise, or request (p. 47). According to Crystal (1993), the purpose of a speaker's speech and its impact on the listener are the two most important factors in defining speech acts. In other words, when examining and analyzing the meaning of any utterance, linguists have to pay attention to the interplay between the

norms of language, the interpersonal setting, and the speaker's purpose. That is, when a person utters a word or phrase that is meant to convey meaning, they are engaging in what is known as a speech act. Speaking a speech act necessitates not just linguistic competence but also cultural sensitivity, as it enables individuals to engage in real-life interactions. Specifically, cross-cultural pragmatics (which investigates the linguistic activities performed by language users from many societies and backgrounds) has incorporated speech acts studies as a sub-discipline (Chapman & Routledge, 1999).

Austin (1962) mentioned in his book "*How to do things with words*", lecture VIII, that there are three distinct levels of an action beyond the act of an utterance itself. For him like the locutionary act, the illocutionary and perlocutionary actions can encompass doing many tasks simultaneously (p. 107). He means when we do in saying, we perform *locutionary act*. Utterances with a certain conventional force, for instance informing, ordering, warning, undertaking, we perform *illocutionary act*. When we achieve to say something, we perform *perlocutionary act*. Additionally, he stated that in such instances, when referencing both a B act (illocution) and a C act (perlocution), we will state 'by B-ing he C-ed' instead of 'in B-ing ...'. This distinguishes C as a perlocutionary act from an illocutionary one (Austin, 1962, p. 109). Consequently, when an individual utters a statement, they execute three acts concurrently: a locutionary act, an illocutionary act, and a perlocutionary act. In other words, he explains that when someone speaks, they perform three types of acts at the same time: a locutionary act (the act of saying something), an illocutionary act (the intended meaning or purpose behind the statement), and a perlocutionary act (the effect the statement has on the listener). The distinction between illocution and perlocution is that an illocution focuses on the speaker's intent, while a perlocution refers to the result or impact on the listener.

In Austin's book entitled *How to Do Things with Words* (1962), he introduced three levels of action that occur when someone utters a sentence: the locutionary act, illocutionary act, and perlocutionary act. By applying Austin's framework, we find the following:

**A. Speech Act Theory:** The first act is the lexical act, which is the process of creating words, phrases, and sentences that have meaning. It includes both the physical process of speaking and the actual words that are spoken. If a doctor was to remark, "You have a high fever", for instance, the locutionary act would entail coming up with and saying those exact words to describe the patient's illness.

**B. Illocutionary Act:** The second step describes the purpose of the statement or its role in the discourse. By using these phrases, the speaker is doing more than simply stating their opinion; they are also offering guidance, asking for something, warning someone, or promising something. The illocutionary act in this doctor-patient scenario may be explaining the patient's illness and suggesting therapy.

**C. Perlocutionary Act:** The third act considers how the speaker's words influence the audience. What this term refers to is the mental or behavioural reaction that the remark elicits. If a doctor says, "You have a high fever", the patient may opt to take the doctor's advice out of concern or fear. The effect that a speaker has on an audience is, thus, central to the perlocutionary act.

Medical discourse can be better understood via the use of speech act theory, which classifies the many communication roles played by language in healthcare contexts. It sheds light on the words doctors employ to do more than just relay facts; they also promise, teach, demonstrate empathy, and change a patient's legal or medical status. To

better understand the role of language in healthcare, decision-making, and the patient experience as a whole, it is helpful to analyze the many speech acts employed in medical communication.

### **Conclusion**

The chapter discusses the role of medical discourse in EFL classes during the COVID-19 pandemic. It distinguishes between GE, ESP, and EMP, emphasizing the need for specialized language instruction. It also discusses the importance of medical lexical competence in professional contexts. It highlights the need for targeted vocabulary instruction, authentic materials, and interactive activities. The shift to e-learning has created both opportunities and challenges for teaching medical English. Blended learning models offer flexibility but also pose challenges in maintaining engagement and comprehension. Despite these challenges, the chapter emphasizes the need to adapt teaching methodologies to ensure continuity, especially in fields like medical English.

# **Chapter Two**

## **Measuring Medical Lexical Competence**

## **2 Measuring Medical Lexical Competence**

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2.7.7. Self-Assessments

2.8. Tests Use

2.9. Techniques to Create Tests

2.9.1. Multiple-Choice

2.9.2. Matching-Tasks

2.9.3. Gap-Filling / Fill-in-the Blank

2.9.4. Close Test

2.9.5. Role Play

2.9.6. Retelling a Story, News Event

2.10. Scoring and Rubrics

2.11. Evaluating Learners' Proficiency in Medical Vocabulary

2.12. Technology in Assessment

2.12.1. Moodle Platform

Conclusion

## **Introduction**

The COVID-19 pandemic caused substantial changes in the process of teaching and learning English in EFL classes. The medical area, in particular, has gained prominence in language instruction since there is a global need for healthcare personnel who speak English well. The main aim of the present chapter is to introduce some basic terms and concepts starting from general to specific: general English versus English for Specific Purposes (ESP), lexis, vocabulary, collocations and chunks, lexical competence and medical lexical competence (MLC). Then, we shift to introduce theories related to acquiring medical terms and how to develop the acquisition of medical lexical competence in EFL classes. Moreover, we highlight the importance of measuring MLC and mention the techniques used to create tests. Finally, we shed light on the official platform used in higher education during the pandemic, where both EFL teachers and learners witnessed what was called online learning and blended learning.

### **2.1 Vocabulary / Lexis**

Vocabulary and lexis are used interchangeably. Thus, it is important to define vocabulary and lexis.

#### **2.1.1 Defining Vocabulary**

Vocabulary is defined in the Oxford Dictionary as all the words in a particular language that a person knows and uses. Scrivener states that vocabulary refers to single words and two-or three-word combinations (2005, p. 227). Carter (1998) offers an orthographic definition of the word, which is a common sense and practical way of looking at it. It states that a word is just a string of letters separated by spaces or punctuation marks.

This definition is used in various activities like essay counting, competitions, telegrams, Scrabble, and shopping lists. However, irregularities exist, for instance, writing “will not” as a pair of words rather than a single one, as opposed to “cannot”; “in place of” has three words, although “instead of” just has two; “postbox” is a bit more versatile than just “post box” or “post-box” (p. 20). Although orthography is the study of written language, we should note that spoken discourse does not generally allow such a clear perception of a word (Carter, 1998, p. 20). He discusses the issue of word stress, spaces or pauses when occurring in speech. It can be interpreted as emphasis, searching for the perfect expression, testing for comprehension, or even just forgetting or paraphrasing what you were going to say (Carter, 1998, p. 20). A key point made by this quotation is that communication is fluid and ever-changing. It demonstrates that human speech is not always predetermined or sequential but rather that speakers modify their delivery in response to audience feedback, their level of intelligibility, and other factors. Clearer comprehension and more productive interactions may be achieved via the use of these approaches in many circumstances, including education, professional communication, and cross-cultural exchanges. It should be noted that not all languages mark word boundaries, with Chinese being the most prominent.

### **2.1.2 Defining Lexis**

In the *Linguistics Encyclopedia*, a comprehensive examination of linguistic terminology is known as lexis, including terms and their meanings, relationships between words, possible combinations of words, and relationships between words and different languages description domains (phonology, morphology, and syntax) (Malmkjær, 2002, p. 339).

Students' linguistic competence and academic success are greatly impacted by their vocabulary knowledge. It is defined as an umbrella term that encompasses various aspects of word knowledge; it goes beyond simply understanding a word's meaning to include a wide range of morphological, syntactic, semantic, and pragmatic aspects of grammar and usage. As cited in Nation (2001), Hamer (1900) described what vocabulary knowledge means when someone knows a word, stating that familiarity with a word entails mastering its pronunciation and spelling, its morphology and grammar, which includes its part(s) of speech, prefixes, suffixes, its meaning which includes contextual meaning or cultural meaning, its usage which includes rhetoric, idioms, fixed collocation, style and the tenor of discourse. Hamer emphasizes in this quote the various aspects of understanding a word beyond just its definition. It emphasizes the significance of being familiar with a word's morphology, grammar, part of speech, suffixes, and sound, in addition to its spelling. It also highlights how important it is to comprehend a word's cultural and contextual meaning, as well as how it is used in rhetoric, idioms, fixed collocations, style, and discourse tone. It is relevant in the context of developing the lexical competence of EFL learners, particularly in the medical field. It emphasizes the importance of a comprehensive understanding of medical terminology, including its pronunciation, spelling, morphology, grammar, and usage in context. This knowledge is necessary for efficient communication in the medical industry, where using clear, accurate terminology is critical. It is crucial to concentrate on establishing entire lexical competence, including pronunciation, spelling, morphology, grammar, and usage, to ensure good communication in the medical profession.

### 2.1.3 The Nature of Lexis

Lexis, derived from the Greek word for ‘word’, refers to full lexicon of a language. Plato and Aristotle discussed lexis in terms of effective language use. Plato focused on different types of diction, distinguishing between mimesis and diegesis. Aristotle made a clear distinction between lexis graphikê and lexis agonistikê, referring to the most precise style for careful reading and the style for stage performances. In *Categories*, Aristotle described various word properties, including semantic properties and, synonyms and homophones (Schmitt et al., 2011, p. 571).

#### 2.1.3.1 Aspects of Lexical Semantics

The importance of studying lexical semantics is related to the fact that it is essential to our understanding of word order and word meaning. Several reasons make this study “central to the linguist’s and the philosopher’s attempt to understand the nature of linguistic and conceptual reality” regardless of our theoretical speculations or commitments both in semantics and philosophy. First, the semantic properties of words play a critical role in the ability of an individual to encode and process utterances. This follows from the observation that semantics is the basis of the majority of tasks that one does with words in everyday life. An individual’s ability to encode and recover information also depends on lexical knowledge, the type of knowledge that speakers represent about the connection between strings of symbols and objects in their world.

The fundamental vocabulary feature is that there is no direct correlation between meaning and form. Schmitt et al. provide the following examples to simplify matters: The meaning “to die” is shared by the words “die”, “pass away”, “expire”, “kick the bucket”, “bite the dust”, and “give up the ghost”. For certain languages, particularly English,

multiple words can function as one unit to convey meanings. No matter how many words they include, objects that serve as single-meaning units are called lexemes, lexical units, or lexical items (2011, pp. 572, 573).

Synonymy is the term used to describe situations when many forms map onto the same meaning. Languages frequently use synonymy as well as the opposite, in which a single form has multiple meanings. This is referred to as homonymy or polysemy. Usually, the distinction centers on how closely or not the various meaning senses relate to one another. Every type of chip; wood, computer, potato, and poker shares the basic quality of being little, slender, thin and flat, which is why chips are typically regarded as polysemous. Since the meanings of a river bank, financial bank, and an airplane's banking when it turns are all completely unrelated, they are typically considered homonyms (Schmitt et al., 2011, p. 573).

Lexical semantics involves studying word meanings, semantic relationships, and the connections between words and more abstract concepts. Some important factors include the philosophical implications of word meanings, the semantic characteristics of verbs connected to grammatical patterns, and the intricacy of the data needed to comprehend lexical semantics.

### **2.1.3.2 Different Kinds of Lexical Items**

The lexical item is the basic working unit of lexical semantics. It has a form and meaning. Forms are typically words, but some complex expressions do not conform to compositionality. The sense of a form is generally built up by combining its parts, but some expressions do not (Collinge, 2005, p. 81).

Dictionary entries describe words in a wide range of senses, description of each possible meaning that a word or phrase could have in a given context. By using component analysis (CA), words may be deconstructed into their constituent parts; for example, “man” can be assigned to “Human”, “Male”, and “Adult” in CA. CA distinguishes a word’s meaning from others and identifies it as part of a certain subject area with common components. CA helps identify synonyms, identical words with identical componential features, and strange combinations like “male woman” (2005, pp. 339, 340).

Lexical semantics is the study of content word meaning, focusing on the open classes of nouns, verbs, and adjectives, as well as contentful members of adverb and preposition classes. It is often exempt from considering issues arising from grammatical word use, such as definiteness and modality (Murphy, 2016).

Malmkjær (2006) claims that Halliday’s functional grammar is that grammar is always seen as meaningful. Halliday demonstrates in his examination of the English clause that he takes the meanings of each component and combines them into the wordings at every point in the text. Because a single phrase is generated by mapping three distinct structures, each of which represents a different type of semantic organization, the clause was selected as the grammatical unit. He claimed that syntagms and grammatical sequences are the building blocks of a language’s semantic system. Word meanings are only one part of the larger system of meanings conveyed by language’s grammar and lexicon; the field known as “semantics” encompasses both. ‘Wordings’ constitute the encoding of meanings and include lexical elements like nouns and verbs, grammatical items like and, and in-between kinds like prepositions (Halliday, 1985/1994: 53).

We deduce that Halliday involves that lexical item in a language comprising several

kinds of words and linguistic components: first, content words; second, function words; third, derivational morphemes; fourth, inflectional morphemes; fifth, compound words; and finally, idioms and phrasal verbs. To better understand, content words mean parts of speech, for instance, nouns (cat), verbs (read), adjectives (intelligent), and adverbs (quickly). Function words modify content words and express the relationship between them, for example, “the/ an/ a” (articles), “and/ but/ for/ nor/ or/ yet” (conjunctions), “in/ on/ at”, etc. (prepositions), “he/ she/ it/ they/ we/”, etc. (pronouns), and “is/ have/ do”, etc. (auxiliary verbs). Derivational morphemes are affixes (prefixes and suffixes, for instance, “un-“ in “unhappy”) and “-ness” in “happiness” respectively) that are added to modify the meaning or grammatical category of the base word. Inflectional morphemes indicate grammatical information like “tense”, “number”, “person”, or “case”. They include suffixes such as “-s” (used to indicate plural nouns) and “-ed” (used for the past tense). Compound words are formed through compounding two separate words (e.g., “toothpaste”) or through phrasal compounding (e.g., “break up”). Idioms and phrasal verbs: Idioms are fixed expressions with meanings that cannot be derived from the literal meanings of their individual words (e.g., “kick the bucket”, meaning to die). Phrasal verbs consist of a verb followed by one or more particles (e.g., “come across” means meet someone unexpectedly).

## **2.2 Chunks Versus Collocations**

Over thirty years ago, Michael Lewis’ publication of “The Lexical Approach” (1993) sparked a profound re-examination of our understanding of language and, consequently, of how it should be taught. According to Lewis, language is made up of pieces that, when put together, form a continuous, coherent text (Lewis, 1997: 7). Chunks are

defined in the Oxford dictionary as a phrase or a group of words that can be learned as a unit by someone who is learning a language. Thornbury (2019) claimed in his article that Lewis, in his work (1997), used the term “chunks” to describe a wide variety of language elements, including collocations (such as “give way”, “the wrong way”, and “the way forward”), fixed expressions, formulaic utterances, sentence starters, verb patterns, idioms, and catchphrases. everything and everything that does not belong in the domains of either conventional grammar or vocabulary based on a single word (See Figure 2.1).

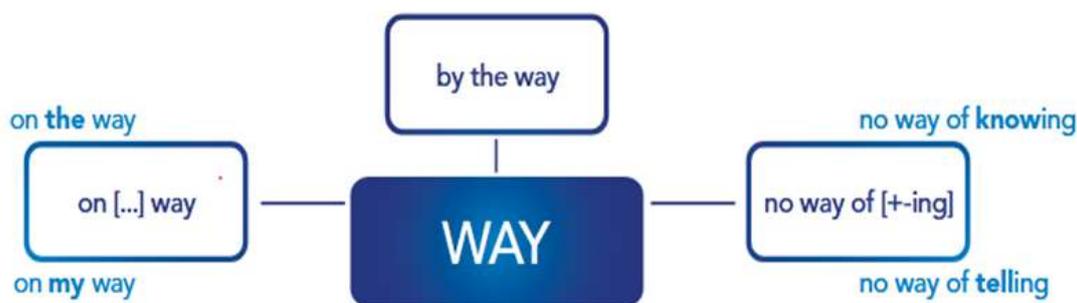


Diagram showing some examples of the fixedness of key phrases used with **way**.

**Figure 2.1**  
*Key Phrases with ‘Way’ (Thornbury, 2019, p. 5)*

According to Krishnamurthy (2002: 289), the term “chunk” is preferred because it is more contemporary and carries less connotation. These can then be further broken down into overlapping classifications including idioms, collocations, lexical phrases, functional expressions, phrasal verbs, etc.

Cambridge Dictionary provides a comprehensive definition of the term Collocation. It is a term or expression frequently employed alongside another term or expression in a manner that appears proper to native speakers, however may not align with its literal meaning. Collocation refers to sequences of lexical items that co-occur but are transparent, with each constituent being a semantic constituent. Some examples of weather conditions are light drizzle, high winds, torrential rain, and fine weather. Due to the re-

ciprocal selection between their constituent parts, these collocations provide a feeling of semantic cohesiveness. When the meaning of one or more components is significantly limited and distinct from neutral situations, the semantic integrity of collocation becomes more apparent (Cruse, 1986, p. 40). The adjective “heavy” in the collocation heavy drinker. Let us examine the situation of a heavy drinker. This definition of heavy necessitates some very specific contextual requirements. For example, one may talk of someone who smokes or uses drugs heavily or of a car that uses much gasoline. To choose this sense of weight, it appears that “consumption” in the surrounding context is necessary.

Nesselhauf (2003) claimed that the subject of collocations raises several issues, such as how to assess students’ collocational proficiency, what kinds of collocations to focus on, and how best to teach them. To be able to respond to these queries, one must first determine which collocations are hardest for one to learn. The subject of collocations brings up several issues, such as how to assess students’ collocational proficiency, what kinds of collocations to focus on, and how best to teach them. To be able to respond to these queries, one must first determine which collocations are hardest for one to learn (As cited in Arbet, 2019).

### **2.2.1 Collocations and Idioms**

Idioms and collocations greatly enhance the rich experience of the spoken and written language of English. They accurately reflect, in a significant way, the culture and society of the English-speaking community.

Idioms, according to the Cambridge dictionary, are described as a set of words used in a certain sequence to convey a metaphorical meaning that differs from the individual meanings of the words used. For instance, ‘kick the bucket’ means ‘die’, and ‘hit the

ceiling' means to 'suddenly become very angry' (Cruse, 1986, p. 42).

According to the Cambridge English Dictionary, a collocation is a word or phrase that is commonly used with a different word or phrase in a way that appears natural to native speakers but cannot be predicted based on its meaning. Ahmed (2019) summarizes the difference between collocations and idioms. In a collocation, two or more words are used together in a way that makes sense. Idioms, on the other hand, are frequently expressions whose meanings deviate from the terms' definitions in a dictionary (p.375). The author provides examples to clarify the difference between collocations and idioms in the English language, for instance, the words "strong rain" and "mild rain" are more suited to describing the weather than "heavy rain" or "light rain" as the former two words are more accurately associated with rain. (Ahmed, 2019, p. 375). A collocation is a typical combination of words that are closely related to each other. "Powerful engine", "fast food", "pay attention", and "make an effort" are just a few examples. Some collocations, like "take a photo", are fixed, meaning that no word other than "take" can properly collocate with "photo". Many collocations let you use multiple words to convey the same idea. For example, you can use "stick to the rules" or "keep to the rules" to express the same idea. The benefit of collocations is that they clarify terminology and makes it simpler to avoid ambiguity, for example, "extremely", "beautiful", or "nice" by using a few words that better suit the situation and convey the idea.

According to McCarthy (1984), collocations are groups of words that convey a single idea when used together. The terms are often written independently, however occasionally a hyphen or single word may be used. It is often possible to deduce the collocation's meaning from the individual terms' meanings. Proficiency in language use can produce effects such as humor by altering standard collocation patterns. It is especially

well-liked by journalists, poets, and advertising.

Whereas, idioms are expressions when the meaning of individual words or phrases deviates from their lexical definitions (Ahmed, 2019, p. 375). An idiom is a fixed statement or phrase that might have a literal meaning or, occasionally, a symbolic one. The phrase's literal meaning is different from its metaphorical meaning when it comes to standard language classification. Every language has an enormous number of idioms. According to Jackendoff (1997), an idiom is a set phrase or word that might have a literal or, occasionally, symbolic meaning. The literal meaning of the phrase is different from its symbolic meaning when it comes to standard language classification. Every language has a vast array of idioms. Hence, an idiom is a phrase whose meaning as a whole differs from the definitions of its words in a lexicon. They reflect national character and reflect certain cultural practices (Ahmed, 2019, p. 375).

The English language is rich with idioms, and they are often confusing and perplexing since there is very little or no relationship between the meaning of the phrases when used separately and the meaning of the full word collection. For instance, the meaning of "spill the beans" is to reveal a secret or disclose confidential information, often unintentionally or prematurely. There is no connection between the literal sense and the word "beans". So, the idiom is considered pure. "Foot the bill" conveys the idea of "pay the bill". This idiom is regarded as a semi-pure idiom since the word "foot" is the non-literal component, unlike "bill", which is utilized literally. "The ball is in your court" signifies that the choice is entirely up to you and many other idioms in the English language.

To comprehend a language, we must be able to detect and identify its idioms. If

someone tries to deduce an idiom's literal meaning word for word, they will be puzzled because they should be aware of its hidden meaning.

### 2.2.2 Lexical Density

Lexical density indicates how many lexical items, for instance adjectives, adverbs, nouns, and verbs are present in the text. It quantifies the benefit of being simple to operationalize and useful in computer analysis of massive data sets (Johansson, 2008, p. 61).

Introducing the concept of lexical density by Ure's study (1971) on lexical density in in oral and written discourse revealed that written texts have a higher lexical density than oral ones. Written texts, which remain accessible and can be read again, carry a higher information load and are more predictable. One reason for this distinction is because spoken texts are inherently more transient and depend on context to be understood. Therefore, written texts have a higher proportion of lexical words (Carter, 2012, pp. 97, 98). The following formula is used to determine the percentage of words in a text, which is called its lexical density.

$$\text{Lexical Density} = \frac{\text{number of separate words}}{\text{total number of words in the text}} \times 100$$

To find lexical density, we divide the total number of words by the number of words used in content. So, a text with high lexical density has a lot of content words and few function words. This kind of text tends to be more complex and harder to read. There is no perfect lexical density score. It depends on what we are writing and who we are writing for.

Lexical density is a useful tool for text analysis and comparison across various genres, styles, and complexity levels. Additionally, because proficient speakers and more advanced language learners tend to produce texts with higher lexical density, it can be used to assess language competency and growth. Lexical density sheds light on the vocabulary employed and the quantity of important information delivered, offering important insights into the lexical richness and complexity of a document.

### **2.2.2.1 Vocabulary Size**

Vocabulary size refers to the number of words a person understands and can use. It essentially measures the breadth of a person's knowledge within a language. Pawley and Syder define vocabulary size in the following way. He claims that the average native English speaker knows only a few thousand single morpheme lexical items, while morphologically complex items are hundreds of thousands, with a significant proportion of these complex items being 'lexicalized sentence stems' (as cited in Lewis, 2002, p. 101). The quote implies that the number of complex words a person knows contributes significantly to the overall vocabulary. Understanding morphemes can be helpful for vocabulary development and improving spelling skills by recognizing patterns in word formation. When Lewis refers to this quote, he points out that English vocabulary is like a Lego set. With a small number of basic blocks (morphemes), we can create a vast number of complex structures (words). This efficiency is a hallmark of many languages. By combining morphemes, we can express a wider range of ideas without needing an overwhelming number of single words. The term "lexicalized sentence stems" likely refers to complex words that originated from phrases or even entire sentences. These words become single units over time, and their parts might not be readily recognizable anymore.

### **2.2.2.2 Context and Co-text**

The term ‘context’ is used for situational factors, and ‘co-text’ is used for the linguistic environment (Lewis, 2002, p. 80). That is, the difference between context and co-text lies in the scope of information they provide to understand a word or phrase. Goodman (1967) claimed that competent readers use co-text and context to deduce what will happen next, saving them from having to interpret every word they come across. As a result, early readers were encouraged to read for pleasure and to infer meaning from text that they were unable to understand. This led to the development of the whole language approach (Simpson, 2011, p.480).

We can clarify the difference between co-text and context as follows: Co-text refers to the immediate linguistic environment surrounding a word or phrase within a text. It includes the words and phrases that appear nearby in the same sentence or paragraph. Co-text helps determine the specific meaning or interpretation of the target word or phrase. It is about zooming in on a specific word in a sentence. The co-text would be the other words in that sentence that provides clues to its meaning. However, context is a broader concept encompassing all the information that influences the meaning of a word or phrase. It includes the co-text but also goes beyond the immediate text to consider situational factors, social context, and world knowledge (Lewis, 2002, p. 103).

### **2.2.3 Vocabulary, Lexis, and Grammar**

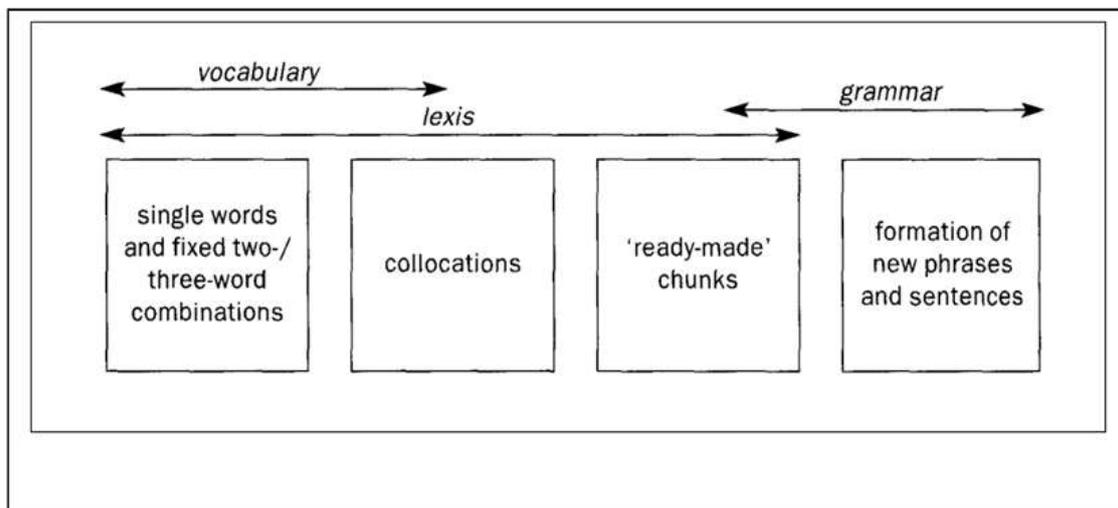
Although “vocabulary” and “lexis” are used interchangeably in linguistics, they can have slightly different meanings. “Lexis” means all the words in a language, including their meanings and forms, whereas “vocabulary” in the Cambridge dictionary is all the words that exist in a particular language or subject; it usually means the words one

knows or uses. Vocabulary is the subset of words that a person knows or uses in a particular situation, whereas lexis in the Cambridge dictionary is defined as all the words of a language; that is, it is the complete set of words in a language, including its forms, meanings, and usage. Therefore, vocabulary refers to the words that a person or particular group knows or uses, but a lexicon is a more general phrase that includes all of the words in a language.

Grammar is typically associated with sentence structures, prepositions, various verb tenses, and other ostensibly generating language components that are practiced in grammar exercises. Grammar is a collection of large sentence frames that may be filled with suitable 'vocabulary' or words.

For most learners, 'vocabulary' means just words. Teachers complain that their learners translate word-by-word. Many 'bits' of a language does not consist of a single word, for instance, 'by the way', 'the day after tomorrow', 'see you soon', etc. The grammar/vocabulary dichotomy appears to be so simple that it is easy to oversimplify what is one of the trickiest and most illuminating parts of language study (Lewis, 1993, p.19).

The 1990s witnessed new developments in the total redefinition of language due to the findings of corpus-based studies and the new teaching approach. The lexical approach has evolved into a new teaching approach, which is opposed to the grammar-based approach. It is important to shed light on the basic relationship that exists between vocabulary, lexis and grammar. Scrivener (2005) shows the difference between the three words as shown in figure 2.2.



**Figure 2.2**  
*Vocabulary, Lexis, and Grammar (Scrivener, 2005, p.228)*

For Scrivener, vocabulary refers to single words or compound words; however, lexis encompasses the entire stock of words, i.e., it includes words, phrases, idioms, collocations, etc. He defines it as a collection of words stored in our “internal database” as well as fully formed “ready-made” fixed, semi-fixed, or typical word combinations that we may access and utilize readily, without relying on our grammatical understanding to build new phrases and sentences from beginning (Scrivener, 2005, p. 227). According to him, vocabulary is our “internal database” of terms as well as whole “ready-made” fixed, semi-fixed, and usual word combinations that we can rapidly remember and use without having to start from scratch when creating new phrases and sentences based on our understanding of grammar. That is, using language effectively requires knowledge of syntax, fixed expressions, and vocabulary. This idea is in line with how language is typically utilized in every day settings when communication is based on a combination of pre-existing language patterns and newly acquired terminology.

Carter (1998) sheds light on potential theoretical and practical problems when dealing with words and grammar. He explores the concept of separate words in a dic-

tionary, for instance, the verb → ‘to bring’; brings (present simple), brought (past simple) and bringing (noun), or the adjective → ‘long’, length (noun) and lengthen (verb), or, the adjective → good, better (comparative of ‘good’) and best (superlative of good). He raises the question of whether these examples should be considered separate entries in a dictionary or not. Other examples must be taken into consideration, like the word “line” in various contexts: fishing line, straight line, or railway line. The problem occurs when two words have the same spelling but distinct meanings, i.e., are these words considered as one word or separate words? Moreover, Carter mentions words with different meanings and grammatical categories, such as: “fair”, “pick”, “air”, “flight”, and “mouth”. Let us write all the different meanings available for the word “fair” in the Cambridge Dictionary.

**Fair** (adj):

1. Acceptable and appropriate in participation.
2. Treating everyone equally and according to the rules or laws.
3. Quite large in number, size, or amount.
4. Quite good. *For example, there is a fair chance that we might win this time.*
5. Pale in colour.
6. Bright and not raining. **E.g.**, *A fair and breezy day.*
7. (of a wind) not too strong and blowing in the right direction.
8. Beautiful. **E.g.**, *A fair maiden.*

**Fair** (adv): According to the rules, it is in a way that is considered to be acceptable and appropriate.

**Fair (N):**

1. A type of entertainment in a field or park at which people can ride on large machines and play large games to win a prize.
2. A type of entertainment in a field or park at which farm animals and products are shown and take part in competitions.
3. An event at which people, businesses, etc show and sell their goods. **E.g.**, *A world trade fair*.
4. A market at which animals were sold (in the past).
5. An event at which people who are looking for jobs can information about companies that might employ them.

He sheds light on polysemic words, that means one word can have varied meanings and belong to different grammatical categories. Both Scrivener and Carter discussed the complexity of words in terms of their forms, meanings, and grammatical functions.

**2.2.4 Lexis in Language Teaching**

Although L2 speaker's lexicon greatly influences their competency in using the target language for communication, lexical components of L2 acquisition have received far less attention in research studies than syntactic and morphological ones. Lexical research has always had a little position within contrastive analysis (CA) and error analysis. Levenston (1979, 148) cites a number of reasons for this neglect, including the fact that most studies on L2 learning have focused on the initial learner and that the more intriguing issues with lexical development do not surface until quite late in L2 development (Els et al., 1984, p. 90).

### 2.2.4.1 Lexis in the Classroom

In EFL classes, Ficher (1984) defined linguistic competence as the capacity to create and understand properly constructed sentences in the target language, as well as a solid grasp of the language's grammar and vocabulary (p. 35). Fisher described students' engagement in class as rule-governed behaviour when they use rules to determine correct grammatical forms.

Wilkins, one of the linguists who shed light and increased the significance of vocabulary in EFL classes when he claimed, without grammar, minimal communication may occur; without vocabulary, no communication is possible (Lewis, 2002, p. 115). The author highlights how vocabulary is important to clear communication. It implies that vocabulary is more important than grammar in providing the content and substance of communication; grammar is essential for appropriately structuring and organizing language to express meaning. It is difficult or impossible to communicate ideas and thoughts without the lack of words and phrases needed to do so.

Vocabulary plays an important role when learning a language. Teaching vocabulary to EFL learners is important to develop their oral production. In order to teach students new words, teachers use a broad range of strategies, including providing definitions, synonyms, and antonyms (Savignon, 2002).

There have been shifting tendencies, according to Carter and McCarthy (1988), such as the communicative approach, the direct method, and grammar-translation, but none of them have prioritized the learner's lexical ability over structural grammatical proficiency (p. 111). It highlights the several approaches and methods that language teaching approaches have changed throughout time, moving from the grammar-translation method,

progressing to the direct method and ultimately to the communicative approach. However, as the quote shows, none of these methods have placed as much emphasis on helping students advance their lexical competence or vocabulary knowledge as their structural grammatical ability. Others shed light on syntax should be used to support words rather than the other way around, as stated by Lewis, who argues that the more one thinks about it, the more rational it appears to assume that lexis is where we should begin (2002, p. 115). He sheds light on the fact that in EFL classes, teachers are required to give more importance to lexis than syntax (grammar). He emphasizes that building up the learner's vocabulary and lexical knowledge is the primary emphasis. The implication is that lexical competence deserves greater attention and emphasis in language teaching rather than just prioritizing grammatical structures. Lewis suggests that when teaching a language, lexis must be the starting point for this process instead of the traditional one: syntax and grammar.

The grammar/ vocabulary dichotomy is false for the lexical approach. Acquiring and learning lexicon are both possible (Krashen's learning/ acquisition distinction). De-contextualised lexis carries meaning. It is grammaticalized, and time is a lexical concept.

### **2.3 Lexis and Semantics**

The field known as "Semantics" examines the meaning of words and sentences in isolation from their actual usage (Griffiths, 2006, p. 15). The study of language semantics aims to understand the knowledge people gain about meaning in their language without advising or pressuring speakers or writers to adopt different meanings. It is not prescriptive and can help pedants understand conventional meanings. Understanding a language's history is fascinating for understanding pronunciation and spelling similarities (p. 15).

Lexical semantics is oversimplified rather than misrepresented (Carter, 1998, p. 19). In order to contextualise a term, one must take note of both the possible context in which it appears and, more crucially, the co-text with which it frequently occurs. If we think of context as circumstance plus co-text, then the co-occurring language is the most crucial part for language learning (Lewis, 2002, p. 103). The quote highlights how crucial it is to comprehend the context in which words are used, especially when learning a language. It means placing a term in its proper context, which is known as contextualization. It entails comprehending not just the word itself but also the context and environment in which it is usually used. Context versus co-text (situation) describes the wider setting or context in which a word is employed. The word may be employed, for instance, in written or spoken language, in an official or casual situation, or in a particular cultural context. Whereas, co-text describes the word's linguistic surroundings. It consists of words and expressions that frequently come before and after the target term, affecting how it is used and understood. Lewis emphasizes the importance of co-text in language learning. He argues that although knowing the situational context is important, the co-text is much more significant for language acquisition. This is due to the fact that in order for language learners to use the target term appropriately and naturally, they need to know which words and phrases go together frequently. The quote implies that in order to acquire a language effectively, one must pay closer attention to the co-text—the particular words and phrases that frequently appear with and surround the target word—rather than merely the larger situational context. This aids students in understanding the appropriate and natural use of the word in a variety of settings.

For Lewis, teaching vocabulary is based on topics or semantic fields. In this way, EFL learners consider different word classes. Simply, it is about urging EFL learners to

talk about a topic and not to name objects related to a topic (Lewis, 2002, pp103, 104). Synonyms are similar in meaning only under specific distributional conditions. For instance, “buy” and “get” are synonyms in the example: 1) I’ll go to the shop and buy some bread, and 2) I’ll go to the shop and get some bread. Verbs like “bear” and “stand” are semantically different and not interchangeable except when used in the negative form. Let us take the following examples to simplify: 1) I can’t stand it, and 2) I can’t bear it (Ka3ahb, 2010, p. 29). *Ka3ahb* highlights an interesting aspect of English semantic complexity and contextual usage. The meanings of the verbs “bear”, “suffer”, and “stand” are different and usually cannot be combined and are not interchangeable, but in some negative situations, they can. In the Cambridge dictionary, “bear” means to accept, tolerate or endure, especially something unpleasant. “Suffer” means to experience physical or mental pain. The verb “to stand” denotes being in a vertical position or bringing oneself into a vertical position, most commonly by straightening one’s legs. However, in negative form usage, for instance, “I can’t bear it” and “I can’t stand it”. In this negative context, both statements convey a strong dislike and an inability to endure the circumstance. The former implies that the speaker can no longer put up with the circumstances and finds them unacceptable. The latter portrays a similar feeling of intolerance and helplessness to bear the circumstances. Hence, they are interchangeable. They would not, however, normally be employed interchangeably outside of this particular construction because of their distinct meanings and customary usage patterns.

#### **2.4 The Concept of Lexical Competence**

Lexis is an important component in language and language development. Lexical ignorance can cause irritation and demotivation in EFL learners. Enriching a higher and

advanced level in the four fundamental communication skills, EFL learners are required to possess a foundation of vocabulary that enables them to do so. Ignoring the methodical instruction of the lexicon is one of the things influencing the continuous growth of communicative ability.

It is important to define competence and its historical context before discussing the idea of lexical competence. In the fields of general and applied linguistics, the term “competence” has caused significant debate (Chomsky, 1965; Hymes, 1972). According to the former, it is just “the speaker-hearer’s knowledge of his language”, or plain grammatical competence (p. 6), but the latter noted that it is more closely tied to communication. As cited in Caro and Mendinueta’s article (2017, p. 206), Hymes stated that most children, as they grow up, learn phrases not just for their grammar but also for their context. He or she learns to be articulate when appropriate and reserved, and how to choose the right people, topics, places, and times to communicate. Simply said, a child develops the ability to do a variety of speech actions, participate in speech events, and get feedback from others on their performance (Hymes, 1972, p. 277).

According to Hymes, linguistic competence is a subset of communicative competence, a broader set of rules that also takes non-linguistic aspects into account. For him, non-linguistic norms can also influence how a language’s performance should be understood. Therefore, people cannot always perceive a conversation based solely on verbal competence. It is based on the analysis of language performance, which offers hints for determining the socio-cultural norms that influence how an utterance is understood. For Hymes, linguistic competence is a subset of a larger rule set, communicative competence, which includes non-linguistic factors. Thus, non-linguistic rules can also guide how a linguistic performance should be interpreted.

Caro and Rosado (2017) state that in the Ministry of Education of Colombia, competence refers to a person's ability to carry out tasks in a certain setting based on their knowledge, skills, talents, and personal traits (2006, p. 11). This indicates a relationship between the fundamental components of competence that enable people to achieve in their day-to-day performance. Accordingly, linguistic competence addresses these elements in connection to lexis, ingrained in communicative competence, particularly in linguistic competence, where grammar is the first and lexis is listed the second (Canale & Swain, 1980; Savignon, 1983; Council of Europe, 2001) (As cited in Caro and Rosado (2017).

## **2.5 The Concept of Language Competence**

The concept of language competence was first proposed by Noam Chomsky in his revolutionary work "Aspects of the Theory of Syntax" (1965). He distinguishes between "competence" and "performance" (Chomsky, 1965). According to him, performance is the actual use of language in real-world circumstances, which a variety of outside events can influence, whereas competence is the idealized, abstract language knowledge that a speaker possesses.

Hymes (1972) coined the term "communicative competence", which is a key theoretical tenet of the communicative language teaching movement. The ability to use language to convey and interpret meaning is known as communicative competence. Subsequently, in 1980, Canale and Swain separated communicative competence into four separate aspects. Discourse competence refers to a learner's capacity to construct coherent utterances; sociolinguistic competence pertains to a learner's appropriate language use; and strategic competence pertains to a learner's capacity to employ strategies to make up

for incomplete knowledge. The idea that understanding how language functions is more crucial than understanding form or syntax is another tenet of communicative language education theory (Griffiths, 2004, p.9).

“Communicative competence” was coined by Dell Hymes to characterize and explain the information that both speakers and listeners possess on how to communicate suitably in various social settings. The communicative language teaching movement, founded by Hymes (1972), emphasizes the importance of communicative competence, which involves using language to express and transmit meaning. It comprises four components: grammatical, discourse, sociolinguistic, and strategic competence. The theory also emphasizes the importance of how language functions over form or structure. Wilkins (1976) advocated the notion of communicative functions of language, which has significantly influenced contemporary language learning programs and textbooks (Griffiths, 2004, p.9).

## **2.6 The Importance of Measuring Medical Lexical Competence**

According to Milton (2009), a clear understanding and correct use of units of measurement is essential in any form of assessment. For a long time, there were no standardized exams in the field of vocabulary testing, and tests had to be designed on an ad hoc basis (p. 17). The quote represents a historical state of affairs in which there were no generally recognized, standardized techniques for assessing language knowledge in the fields of educational and psychological evaluation. Language and vocabulary knowledge measurements have evolved over the past 20 years, with researchers varying in vocabulary items and term definitions. Currently, there are few tests that can accurately assess every aspect of a learner’s vocabulary knowledge, but these tests enable large-scale studies, comparisons across time, and inter-language comparisons. Test creation focuses on

reliability and validity (Milton, 2009, p. 17).

This part aims to explain the importance of measuring vocabulary knowledge in EFL classes. EFL learners do not need only to understand medical information or translate them for others, but they need to communicate with peers and others using medical lexical knowledge effectively. Hence, measuring MLC is important for many reasons: Its relevance to career and academic goals, its role in strengthening learners' ability to communicate effectively in healthcare settings, its contribution to enhancing reading comprehension of medical texts, its integration into the EFL curriculum, and its impact on improving learners' confidence and competence.

The use of initials and acronyms in medical discourse is crucial for career and academic goals. According to Kasprovicz (2012), acronyms are abbreviations for complex words or phrases, often written in uppercase letters. They are commonly used in English medical terminology due to their historical heritage and temporal and spatial economy. Initials are also common in medical terminology, shortening long descriptive names like DNA, SARS, GP, and AIDS.

Linguistic exchange plays a crucial role in healthcare settings, as it involves the exchange of codes between sender and receiver (Bourdieu, 1991, p. 67). Medical language, a specialized language, is used for medical purposes to facilitate communication between specialists. Herget and Alegre (2009) emphasize the importance of understanding medical discourse to enhance and automate communication in healthcare settings. For Galitsky (2023), this knowledge can improve the efficiency and effectiveness of interactions between patients and healthcare providers. During the COVID-19 pandemic, understanding and utilizing medical discourse was essential for improving public health messages, au-

tomating routine questions, and designing better communication tools. Proper automation integration and excellent communication are crucial for facilitating healthcare encounters and enhancing overall patient care.

Neologism, a term in medical terminology, refers to newly coined or existing lexical units that acquire new meanings (Newmark, 1988). English is the lingua franca of medical research, and most neologisms originate from English and are later translated into other languages (p. 140). Neologisms are common in medical terminology, particularly for disease names and functional-descriptive terms like Swine flu (Argeg, 2015). As the medical field develops, new words and expressions are often used to characterize new ideas, advancements in technology, and therapeutic approaches. Understanding these neologisms is essential for understanding recent developments in medicine and ensuring accurate communication in medical settings. It also helps create new terminology and gives well-known terms new interpretations (Alduhaim & Alkhaldy, 2023, p. 23).

Integrating medical language into the EFL curriculum is effective during crises like the COVID-19 pandemic. Vocabulary learning should focus on specialized areas like academic vocabulary. New terms like covidiot, covexit, WFH, infodemic, and PPE have emerged, playing a significant role in language, particularly for translators who serve as mediators between societies and countries. These terms have become widely used globally, promoting understanding and application of specialized vocabulary in each field (As cited by Alduhaim & Alkhaldy, 2023, p. 24).

The COVID-19 pandemic has brought about new lexical and sociolinguistic changes, making it crucial to measure medical lexical competence (MLC) to improve learners' confidence and competence. As new terms and phrases emerge, they become ingrained

in daily routines and communication practices. Current learners are better equipped to comprehend and participate in modern medical discourse, contributing to professional debates and successfully applying knowledge. Teachers can help students stay updated with changing terminology by emphasizing the measurement and improvement of MLC, boosting their confidence in using new terms and enhancing their competence in professional contexts (Al-Salman & Haider, 2021, p. 24).

The COVID-19 pandemic demonstrated the value of integrating and evaluating medical vocabulary to improve learning objectives and real-world applicability. To prepare EFL students for effective communication in healthcare settings, comprehend specialist texts, and accomplish their academic and professional objectives, medical lexical competency must be integrated into the EFL curriculum and graded and measured in the appropriate way. It is important for EFL researchers to introduce medical lexical knowledge in the curriculum in order to improve their learners' lexical competence and urge them to communicate effectively and accurately. People in general and EFL in specific need to understand and use these neologisms correctly in order to ensure clarity and precision in medical situations, as new medical terminology and phrases are constantly being introduced.

## **2.7 Measuring Medical Lexical Competence**

A specialized assessment instrument is needed to measure L2 medical lexical competence, including receptive and productive knowledge of medical vocabulary, medical collocations, and technical medical terms. Language is not like weight or distance when it comes to measurement. Instead of measuring performance, we rely on students to demonstrate their understanding by grades (Milton, 2009, p. 6). The quote highlights the

inherent challenges in language assessment when compared to more objective measurements. Physical measurements are simple to evaluate, but assessing language proficiency necessitates taking into account the intricacy of language users' and interpreters' usage. Grading might occasionally reflect a learner's performance in a particular situation rather than provide a thorough assessment of their general language competence due to the use of performance-based assessments. This demonstrates the necessity of creating more precise and nuanced language assessment techniques in order to capture and comprehend learners' actual skill more fully.

In this part, we provide an explanation of vocabulary knowledge exams and show some of the assessments that have been conducted to assess learners' understanding.. So what makes a good vocabulary test? In EFL classes, lexical competence is frequently assessed using a number of well-known exams. These exams evaluate vocabulary in a number of ways, such as comprehension, usage, and retention. Here are a few of the most well-known and recognized tests and those were used in the present study:

### **2.7.1 Vocabulary Level Test (VLT)**

VLT was made by Paul Nation and it is described in Nation (1983, 1990). It is about choosing the right word next to its meaning. It includes terms from various frequency levels (such as academic and high-frequency terms) and learners are asked to match words to their definitions or utilize them in sentences. VLT was created by Nation and Beglar and is used to determine various vocabulary knowledge levels.

The exam is thoughtfully crafted to be brief, straightforward, and easy to score and understand (Nation, 2001, p. 21). The test is divided into three levels. The first level is called 'high-frequency words', which is used for everyday conversation. They

include function words and content words, for instance, in, for, the, a, and government, forest, adoption, boundary, etc. Michael West's A General Service List of English Words (1953a) is the gold standard for high-frequency word lists; it includes over 2000 word families. Words that appear often (more than eighty percent) are known as running words (Nation, 2001, p. 11). Nation emphasizes the significance of high-frequency words in English language learning, which represent 80% of words in ordinary writings and can be covered by a small collection of word families. Learning high-frequency language improves communication and fluency, suggesting that focusing on specific phrases can enhance comprehension. The second level is called 'academic words' which is related to terms frequently encountered in academic texts and discussions, for example, policy, phase, adjusted, sustained, etc. The percentage of running words in the text is around 9% (Nation, 2001, p. 12). He highlights that gaining proficiency in academic words (9%) can greatly improve a reader's comprehension and participation in scholarly discussions. Although most texts are dominated by high-frequency words, academic words are essential for communicating particular thoughts and ideas in academic settings. The third level is called low-frequency words, which are less common vocabulary words that learners may encounter in more specialized contexts. In an academic text, they represent 5% of the words (Nation, 2001, p. 12). According to Nation, low-frequency words are words that we rarely encounter in our use of language. He claims that "they consist of technical words for other subject areas, proper nouns" (Nation, 2001, p. 12), for instance, zoned, pioneering, perpetuity, aired, etc.

High-frequency words are necessary for fundamental communication, academic terms are important for scholarly situations, and low-frequency words are frequently specialized and less prevalent. The VLT is structured like a multiple-choice test, and the

test-taker is required to opt for the correct meaning or usage. Each level is designed to be finished in 15-20 minutes. The VLT test scores of the present study represent the number of correct answers on medical vocabulary, which provides information on first-year learners' medical vocabulary knowledge at various levels. The results can be used to identify specific areas of strength and weakness in medical vocabulary knowledge.

### **2.7.2 Word Associates Test (WAT)**

The WAT was used first in the domain of psychology, and then it received interest from foreign language learning (Milton, 2009, p. 141). It evaluates learners' capacity to link words to related or meaning-related words. That is, students must select words that are correlated or semantically related to them when they have a target word. It is a useful instrument for assessing associative understanding-based vocabulary knowledge. It is a useful option for both educators and researchers because of its emphasis on word relationships, which offers insights into both receptive and productive vocabulary. Milton (2009) investigates the usefulness of word association exercises in evaluating vocabulary. He highlights that by looking at the connections students make between words, these activities draw on both the productive and receptive parts of vocabulary. The author talks about the validity and dependability of utilizing these kinds of activities in educational contexts and emphasizes how they might show a more profound knowledge of language. He also offers useful applications for teachers, such as customizing instruction to improve vocabulary learning and using these assignments for diagnostics. He considers WAT as a different way to measure vocabulary knowledge where a word, like "white", is used as a stimulus and the testee is asked to generate a term that corresponds to it (Milton, 2009, p. 141). In this case, the testee is supposed to respond to the stimulus by producing the word 'black', for instance. Hence, the testee can be able to produce more low-frequency words

in less time.

In the present study, if the target word is ‘pandemic’, the participants may associate it with a global outbreak, virus, contagion, or vaccine. Another example is if the target word is ‘epidemic’, the participants may associate it with public health, prevention, symptoms, or infection. This test was done orally to grasp as many medical terms as possible so that learners could use them in their oral presentations. EFL teachers can use the WAT as a diagnostic test to identify strengths and weaknesses in their learners’ vocabulary. So, its emphasis on word relationships offers insights into both productive and receptive vocabulary. It is a useful choice for both researchers and educators.

### **2.7.3 The Diagnostic Tests**

Bachman and Palmer claim that EFL teachers are required to do a diagnostic test to determine if students have a sufficient vocabulary to complete specific assignments (p.291). The diagnostic test determines whether the test takers have mastered a specific material in a program or not (Bachman & Palmer, 1996, p. 291). Nation (2001) states, “Vocabulary Level Test is a diagnostic test” (p. 387) when teachers do not focus on the scores obtained by learners but rather focus on the number of high-frequency vocabulary learners master. Bachman and Palmer (1996) claim that students may comprehend all texts at level 2 and below provided they possess familiarity with the 500-word lexicon of the Longman Structural Readers (p. 291). There is a need to design diagnostic tests because they are easy to interpret their results. Then, teachers relate these interpretations to actions, i.e., using a variety of methods and approaches to teach vocabulary knowledge.

#### **2.7.4 Achievement Tests**

The achievement test is the most formal exam used in the assessment and instruction of foreign languages. It gauges how much knowledge a student has learned throughout a course of study. Usually, its purpose is to assess learners' proficiency in the foreign language (Saihi, p. 44). Sharma (2004) claims that its goal is to determine the extent to which a student's language abilities are enhanced as a result of classroom teaching (p. 180). The author emphasizes that students' performance in a variety of language domains, including vocabulary, grammar, and communication skills, is measured by the achievement test, which assesses how well they have understood the subject given. By assessing efficacy, pinpointing areas for development, and adjusting future instruction to better suit learners' requirements, this data assists teachers in making sure that learning objectives are being accomplished. The achievement test is a summative assessment that is given at the conclusion of a scholar-year unit of study. It gauges the level of proficiency that pupils have attained within a particular course of study or program (Saihi, 2015, p. 44).

There are two types of achievement tests: formative and summative. Hence, the achievement tests have dual purposes as both formative and summative ways (Saihi, 2015, p. 44). When used as a formative assessment, it conveys the idea that teachers have the flexibility to revise their lesson plans, create new syllabuses, and even slow down student progress in order to better retain the content in the event that it becomes essential later on. Despite this, test-takers are impacted by these reconsiderations because they are involved in the creation of the curriculum for the future. Being a summative assessment, it directly addresses the success or failure of the students. The instructor can start remedial work

right away to make the EFL classrooms better.

The achievement test is based on a book or syllabus that was read during the term. Given its emphasis on the specific topic that students are expected to have studied, this test can be considered fair. According to Hughes (1989), a test's design can have a negative impact on its results, and its requirements can occasionally change depending on the unit's goals. Consequently, the unit's objectives ought to serve as the foundation for the achievement exam. As such, it will impact the selection of books that are suitable for the syllabus. Positive effects are anticipated for the test as well as for the educational process overall.

#### **2.7.5 Short-Term Achievement Tests Vs. Long-Term Achievement Tests**

Both short-term and long-term assessments can measure academic progress. They are made to gauge the information and abilities a student has picked up over various periods. Although they both evaluate learning outcomes, the period they evaluate immediate versus cumulative learning differs.

The No Child Left Behind Act of 2001 aimed to teach all children to master reading and arithmetic by 2014. Each state set AYP targets to achieve this goal, holding states and schools accountable. Indiana's accountability system measures performance progress in short-term gains, assigning schools to improvement categories like Exemplary, Commendable, Academic Progress, Academic Watch, and Academic Probation. These categories have recently been updated with letter grades (Grissmer, Ober, & Beekman, 2014, p.4).

So, the primary distinction is the type of knowledge being evaluated: cumulative

versus immediate. Short-term achievement tests evaluate information and abilities right after a lecture or unit. They assist in assessing retention and comprehension of recently taught material by concentrating on recent learning. Long-term achievement tests, on the other hand, assess cumulative information gained over a longer time frame, frequently after a course or academic year. They gauge a student's overall material knowledge as well as the long-term effects of their training, offering insights into their steady growth.

### **2.7.6 Proficiency Tests**

The purpose of the proficiency test is to assess students' abilities; it is not linked to any curriculum or syllabus. Although there is time for planning and administering the exam in advance, the results of the test ultimately matter. Examples of these examinations include the American Testing of English as a Foreign Language (TOEFL), which assesses students' general English proficiency in order to grant them admission to any university or employment in the United States. A different proficiency exam with a purpose nearly identical to the TOEFL is the Cambridge First Certificate exam.

Proficiency tests focus on language skills, aiming to measure a student's competence and performance in various fields like art, science, or medicine. Hughes (1989) defines proficiency tests as tests that measure a student's ability to use the target language appropriately. The Cambridge First Certificate test, a general test, aims to determine if a student's language abilities meet a specific standard set. Passing this test allows candidates to take a different level test, but they are not free of charge as they are payable.

These tests include a variety of techniques for evaluating lexical competence, including gauging the breadth and depth of one's vocabulary as well as comprehension of word associations and context-based usage. Selecting the right test frequently hinges

on the particular objectives of the evaluation as well as the student's proficiency level. These tests were made to find out about first-year EFL learners' progress in the domain of medicine and healthcare and encourage them to tackle new areas of communication according to the current circumstances in our society. In this way, EFL learners became proficient in their communication with peers and other professional people, for instance, nurses and doctors, during the COVID-19 pandemic.

### **2.7.7 Self-Assessments**

The term "self-assessment" refers to the two essential components of any assessment decision: determining the standards or criteria that should be applied to one's work and determining the degree to which one's work satisfies these standards. Self-marking is the term used to describe situations in which students evaluate their own work without also helping to develop standards (Boud & Falchikov, 1989).

For Boud and Falchikov, when students actively evaluate their own progress and the results of their own learning, this process is called self-assessment (1989). This technique is a means of empowering students to take an active role in their education (Boud, 1995). Its main function is to provide formative assessment by means of self-reflection on the learning process and its results (Sluijmans et al., 1998), which gives students a sense of autonomy and strengthens their ability to rely on themselves. Boud and Falchikov (1989) highlighted the following benefits of using self and peer assessment. Learners can:

1. Encourage students to take responsibility in self-directed learning;
2. Inspire and support their active participation in the process;
3. Make a test a collaborative rather than an isolated activity (i.e., more objective);

4. Encourage a sincere exchange of ideas;
5. Result in more focused and efficient learning;
6. Encourage learners to be more independent in their learning;
7. Communicate to learners that their opinions and experiences are respected and valued,
8. Cultivate adaptable human abilities and,
9. Create a learning community where students perceive themselves to be influential and involved.

## 2.8 Tests Use

Tests can be beneficial in two different ways. They might be useful for improving education and politics. Assessments make school districts and other organizations appear effective and responsible. Taking examinations is a reasonable course of action. For Lázaro, a proper assessment activity will accurately represent the information and skill that you are aiming to test (Lázaro, p. 17). He draws attention to the idea of assessment validity, which is the extent to which a test captures what it purports to capture. A task in an assessment must correctly represent the particular knowledge and abilities that the evaluation is intended to examine in order to be considered valid.

Baker (1979) summarizes four principles that guide the use of tests. First, Test specifications should be public, allowing everyone to understand their purpose, evaluation, and use. This knowledge can prepare students for expected outcomes and examine connections between curriculum, teaching, and testing. Second, tests should be economical, easy to administer, score, and interpret, conserving money and time. Exploring the

cheapest tests is an appropriate tactic in resource-dwindling times. Third, tests should closely relate to instruction, ensuring connections are intact. Reviewing the relationship between testing, teaching, and learning is crucial. Exploring new ways to integrate testing into instruction is essential. Fourth, teachers have to make sure assessments are essential, convey the desired message, give students meaningful experiences, and are correct in every way (p. 24).

If the testing process is reviewed using these four concepts as a foundation, people's perceptions of tests and their value may shift dramatically.

According to Lázaro (n.d.), three primary goals compose assessment:

**A. Monitoring the students' progress:** It should provide instructors with an assessment of their learners' work at various points during the course.

- The goal of the initial assessment, which is completed at the start of the course, is to pinpoint each student's unique strengths and shortcomings.
- Throughout the course, formative assessments are conducted to monitor students' progress.
- The goal of summative assessments is to determine what abilities and limitations students will have at the end of the course.

**B. Strengthening the learners' learning:** It should also serve as a means of providing regular feedback to the students, enabling them to recognize their successes and shortcomings. There are significant ramifications for the learners of this: self-control, learning from errors, and taking their learning seriously.

**C. Assessing the effectiveness of the teaching/learning process:** It should provide educators with a basic understanding of the level of success in the classroom, en-

abling them to determine whether the following are true: Every aspect of the course is well-designed, from the approach to the goals to the resources to the assessment (Lázaro, p. 12).

With this knowledge, educators may prepare remedial work for the areas where the class is struggling and make the required adjustments before it is too late.

## **2.9 Techniques to Create Tests**

Some techniques include creating unambiguous test questions, matching learning objectives to questions, and ensuring a range of item formats (such as, gap-filling, matching, and multiple-choice tests). The researcher used common techniques for testing medical vocabulary knowledge.

### **2.9.1 Multiple-Choice**

Answering multiple-choice questions requires more than just selecting one of four or five options. Different forms, such as same/different, circle the answer, true/false, pick the letter, and matching, are particularly beneficial for low-level readers (Brown & Abeywickrama, 2019, p. 201). Thornbury (2002) introduces the contextualized choice exam, an unconventional method of employing multiple-choice questions.

When it comes to vocabulary tests, Brown and Abeywickrama talk about the validity and usability of vocabulary tests using multiple-choice questions (MCQs). They highlight several important points. First, the use of MCQs allows for the rapid evaluation of a large body of information about a given topic. Second, objective scoring indicates that MCQs are great for objective grading since the answers are already known. This makes the exam more reliable. Third, word meaning, collocation, usage, and form are

just a few of the many aspects of vocabulary knowledge that MCQs can evaluate. Fourth is uncertainty risk, which means one possible negative aspect is that learners can end up with inflated marks due to guessing the correct answer. One way to address this is by making sure that the erroneous alternatives, or distractions, are believable without being deceptive.

However, Thornbury is typically more critical of the multiple-choice method. Among his worries is decontextualization, which uses multiple-choice questions in isolation and does not correspond to how language is really used in real-life situations. He thinks that vocabulary tests should be more contextualized. Second, knowledge for production versus receptive use, which means the capacity to utilize words in speech or writing, is more effectively evaluated by open-ended questions than by multiple-choice ones. Both the receptive and productive parts of vocabulary should be tested. Third, limited depth of knowledge, which entails that MCQs can evaluate words' basic meanings, but they might need to improve at testing more complex aspects of vocabulary, such as how to use a word in different contexts or idiomatic phrases.

### **2.9.2 Matching-Tasks**

Matching is a good format for this level of selection since all the test-taker has to do is answer correctly. In matching methods, vocabulary is the most common requirement (Brown & Abeywickrama, 2019, p. 207). The researcher in the present study adopted the technique of matching and definition. In other words, instead of matching words that are synonyms or opposites, we provided a list of terms and a list of definitions. Then, learners were given the task of matching the terms with their respective meanings. The definitions were clear so that students understood them and came to the right answer. The following

format is an example taken from the study:

Match the terms with their definitions: a. Coronavirus / b. Crises / c. Hospitalized/

1. .... : dangerous or unstable times or situations that demand attention.
2. .... : placed in a hospital for treatment.

The answer: 1 → b. Crises / 2 → c. Hospitalized/

One way to make matching more of a conversation starter is to include a list of words and a series of sentences with blanks in the first numbered list.

### **2.9.3 Gap-Filling / Fill-in-the Blank**

Many multiple-choice questions can be transformed into “fill-in-the-blank” items, requiring test-takers to write a word or phrase. In sentence-completion tests, students are asked to read a passage and then compose a phrase to complete it (Brown & Abeywickrama, 2019, p. 210).

A fill-in-the-gaps test asks students to choose the appropriate word or words to complete a sentence or text. Unlike other exam formats that give alternatives, this one requires the test-taker to provide their own response. Although they have some similarities with cloze tests, fill-in-the-gaps questions tend to have shorter passages and fewer blanks, with an emphasis on individual phrases. Word recognition, vocabulary, and, on rare occasions, grammar proficiency are the main areas tested in this style.

#### **2.9.4 Close Test**

A common reading evaluation tool throughout the years has been the cloze technique. Educational psychologists came up with the term “cloze” to describe the Gestalt psychological concept of “closure”, which refers to the capacity to complete an incomplete visual, aural, or cognitive image by supplying missing components from background schemas (Brown & Abeywickrama, 2019, p. 211).

In a cloze exam, the student is given a text to complete with a number of strategically removed words. This comprehensive test assesses not only the student’s vocabulary but also their comprehension, grammar, and context-dependence. In a multiple-choice exam, the candidate either writes down their answer or chooses one from a predetermined list. In this approach, the missing words are decided by the general content and structure of the paragraph, allowing for an assessment of vocabulary in context. Here is an example made in the present study.

#### **2.9.5 Role Play**

This sort of question asks test-takers to recount a tale or news event that they have heard or read. The paraphrase assignment is different than this. The piece of writing is more extensive and may even belong to a distinct genre if it is a presentation or news piece. A variety of goals, including fluency, interaction with the listener, and understanding the original text, are involved in the assignment of such a task. Other goals include the production of various features of oral discourse, such as the communication of event sequences and relationships, patterns of stress and emphasis, and “expression” in the case of a dramatic story. Naturally, the scoring must adhere to the specified standards (Brown & Abeywickrama, 2019, p. 192).

### **2.9.6 Retelling a Story, News Event**

When it comes to evaluating public speaking abilities, Doff (1988) says that oral testing and narrative are the way to go. In particular, Doff notes that students can show their proficiency in expressing themselves clearly and fluently through narratives when tested orally. Students are able to practice their use of natural language via storytelling, which encourages them to plan, choose relevant words, and speak coherently. It provides a more realistic and conversational setting for testing a learner's oral competency while also checking their grammar, pronunciation, and narrative flow abilities (p. 100). He required EFL teachers to diversify the type of activities when it comes to role play by suggesting the following:

First, improvising dialogue requires learners to create dialogues on the spot without a pre-written script, fostering spontaneous language use. Doff (1988) emphasizes that improvising dialogue allows learners to think rapidly, utilize acceptable language and syntax, and respond spontaneously in discussions. It fosters originality, fluency, and adaptability to varied conversational circumstances, making it an excellent exercise for developing communicative skills (p. 101).

Second, interviews are based on a text where learners read a text and then take part in an interview, either as the interviewer or the interviewee, depending on the substance of the material. This game encourages students to engage fully with the subject, ask questions, and respond, which improves both understanding and spoken communication abilities. Doff emphasizes that this technique allows students to practice speaking in a controlled but flexible manner, encouraging engagement, critical thinking, and the capacity to analyze and expound on a given topic (p. 101).

Third, free role play encourages students to utilize their imaginations and communicate flexibly by having them act out hypothetical situations rather than following a predetermined script. Students will be able to hone their conversational abilities, use functional language, and adjust to various communication settings (p. 102).

The researcher provided learners with an article related to the pandemic entitled “COVID-19: A Challenging Pandemic”. Then, the teacher asked the learners to discuss it. Later, she suggested different topics related to the same subject and asked learners to choose one and prepare their role-play. The topics entitled: (1) “How has COVID-19 impacted the world?”, (2) What causes a disease to become a pandemic? (3) Why do you think the author states, “during the pandemic, everyone has a role to play to stop the spread of disease?”, (4) Why should there be a global effort to detect and stop COVID-19? (5) How did the United States initially respond to the pandemic? How did this impact the spread of COVID-19? And (6) How do past and present pandemics compare? respectively.

## **2.10 Scoring and Rubrics**

A rubric is a grading guide that details the precise standards and levels of performance. It can be used to assess a learner’s vocabulary knowledge and usage. Outlining the criteria for evaluating students’ vocabulary skills, often in the form of a collection of adjectives representing varying degrees of competence, serves as a useful guide for educators and their students.

The two most common kinds of rubrics are analytical and holistic rubrics, which are the two most common types. In analytical scoring, the rater gives a score for each of the task’s evaluated characteristics, while in holistic scoring, the rater takes a broad view

of performance quality. The widespread belief that holistic scoring is simple, inexpensive, and accurate makes it the method of choice for large-scale evaluations. Using analytical scoring in the classroom is beneficial since it allows both students and teachers to better understand each other's areas of strength and improvement (Jonsson & Svingby, 2007).

Rubrics enhance consistency in performance assessment, validity of assessment judgment, and promote learning in education. They enhance scoring across students, assignments, and raters, providing a more accurate evaluation than conventional written tests. Rubrics are particularly beneficial in formative, self-, and peer assessment, as they provide explicit criteria and standards, promoting quality feedback and promoting student learning (Jonsson & Svingby, 2007). According to Saihi (2015), the researcher can use grading rubrics to identify learners' weaknesses and provide remedial assignments for the next sessions.

The study by Saihi suggests that holistic scoring rubrics are not sufficient for providing accurate scores (2015, p. 149). To better diagnose students' writing deficiencies, the use of analytical rubrics is recommended (p. 152). Analytical rubrics offer more detailed feedback, helping educators design specific treatment tasks for future sessions. Unlike holistic rubrics, they provide more formal and informal content for evaluation (p.165). Scoring is the act of assigning values according to the criteria laid out in a rubric, which provides a framework for evaluation. Collaboratively, they guarantee that student achievement is evaluated in a fair, transparent, and relevant manner.

### **2.11 Evaluating Learners' Proficiency in Medical Vocabulary**

EFL learners' communication ability is affected by the size of their vocabulary knowledge, both breadth and depth. Having strong vocabulary knowledge is essential for

learners' language proficiency and academic success. Numerous academics have stressed the importance of vocabulary over grammar, such as McCarthy (1990), who claimed even if a student excels in learning grammar and mastering the sounds of a second language, communication cannot be meaningful without the vocabulary to express a wide range of ideas.

## **2.12 Technology in Assessment**

The use of new technologies in the classroom and for language acquisition has grown rapidly in recent years. There is a growing trend among language learners throughout the globe who utilize various forms of cyber technology, such as mobile phones, tablets, computers, and the Internet, to varying degrees. Thus, it should come as no surprise that the vast majority of language classes make use of computer-assisted language learning (CALL) or mobile-assisted language learning (MALI) in some way to accomplish their aims (Brown & Abeywickrama, 2019, p. 20).

The COVID-19 pandemic has caused a sea change in the educational system, with many courses moving online rather than into traditional classrooms (Liu, 2023). As cited by Liu (2023), the education system has seen a sea change in the digital era, especially after the COVID-19 pandemic (Adedoyin & Soykan, 2023; Barrot et al., 2021). Pokhrel and Chhetri (2021) state that nearly 1.6 billion pupils in over 200 nations were impacted by the epidemic, making it the worst interruption to education systems in human history. Liu (2023) said that participants' everyday lives were changed by COVID-19, which might have influenced their academic achievement. Individuals' educational demands are always evolving, and traditional methods of teaching need to catch up. In light of this, online learning has become more important throughout the epidemic.

Online and hybrid courses have replaced traditional classroom instruction at MKUB and other Algerian institutions as a whole during this time. On the other hand, our individual and societal standing determines how its effects play out. The worldwide epidemic compelled everyone to arm themselves with adequate knowledge and essential terminology on the subject, regardless of their degree of education or if they are medical experts. Vaccination, crises, viruses, pandemics, and other health-related subjects are common themes of conversation and debate among them.

As an EFL instructor at MKUB, one of my main goals is to help first-year EFL students expand their vocabulary and improve their lexical competencies via exposure to a variety of themes in oral communication. Nevertheless, we feel compelled to address this matter in light of the COVID-19 problem. We found that first-year oral students were unable to talk or communicate information regarding the COVID-19 epidemic, so we felt compelled to address this issue and hunt for ways to improve their lexical competence in healthcare-related subjects by using the blended way of teaching and learning (Benzida & Chelli, 2022). The official platform used by teachers was Moodle platform.

### **2.12.1 Moodle Platform**

As the COVID-19 epidemic interrupted regular in-person classrooms, the Moodle platform provided an accessible, interactive, and flexible learning environment that greatly benefited EFL students.

Algerian universities were obliged to shift from face-to-face learning to online learning during the pandemic. The minister of higher education recommended the MOODLE Platform as an online learning option in the wake of the unexpected lockdown, which aimed to save the academic year. The latter made it possible to make use of contempo-

rary technology to its fullest extent, resulting in an interface for online education (Berbar, 2020). The Moodle platform is an e-learning system that allows educators to create and manage course content for online learning environments (Costa et al., 2012; Stasinakis, 2015, as cited by Bouguebs & Boudersa, 2023, p. 272). The second generation of online learning platforms is represented by this language management system, which allows for the construction of web-based learning materials that learners engage with by means of Internet characteristics (Bouguebs, 2021). According to Piotrowski (2010), there are six broad categories into which the MOODLE platform's operations fall: creation, organization, delivery, communication, collaboration, and assessment. The use of Moodle has the potential to improve student learning and foster their capacity for independent study. Teaching English to Algerian EFL students requires MOODLE's implementation above all else.

It is clear that MOODLE presents a number of obstacles that prevent both instructors and students in Algerian EFL classrooms from making full use of it. Because the official introduction of MOODLE, nearly every institution in Algeria set out to educate faculty on how to make the most of online learning platforms (Bouguebs, 2021, p. 143). Algerian institutions have made a significant move toward integrating digital learning aids with the launch of MOODLE. It emphasizes the significance of providing instructors with the abilities they need to successfully navigate and use online platforms by concentrating on training university instructors. Educators and students alike benefited from this program's enhancements to classroom practices and readiness for the anticipated surge in online learning opportunities brought on by the epidemic (Bouguebs & Boudersa, 2023, p. 273).

EFL learners greatly benefited from the Moodle platform's ability to provide re-

mote, adaptable, and efficient learning throughout the pandemic. Its capacity to facilitate both real-time and delayed learning, as well as its many evaluation tools, made it an all-encompassing and robust setting for language acquisition. This led to Moodle's meteoric rise to prominence as an EFL classroom tool, allowing students to keep honing their English proficiency in spite of international upheaval.

### **Conclusion**

Due to the COVID-19 consequences, it becomes highly necessary to better understand EFL learners' needs of medical terms and lexis in order to help them avoid any breakdown of communication when talking about health care, medicine, and pandemics. Bridging this vocabulary gap for first-year EFL undergraduates, the present chapter provides a window to the medical register. EFL teachers can enhance students' awareness of medical words by incorporating concordance data into teaching materials, thus consolidating their first-year vocabulary knowledge. We attempted to assess medical lexical competence in the era of the COVID-19 epidemic among first-year EFL learners at MKUB. Here, we mean testing the medical terminology knowledge and skills of students with a focus on how well they adapt to the new norms imposed by the COVID-19 pandemic. In light of the treatment recommendations made during the pandemic, the primary focus of the study was on the ways in which first-year EFL learners improved their medical lexical competence.

# **Chapter Three**

## **Research Methodology**

## **3 Research Methodology**

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## **Introduction**

The current chapter addresses an essential part of the research work: implementing medical discourse to enhance EFL learners' lexical competence during the COVID-19 pandemic. It deals with the implementation of an experimental design that involves one experimental group and one control group from first-year LMD in the Department of English Language and Literature at MKUB. The chapter provides the methodology and procedures used and the description of the experiment. It explains the tests of measurements used in the pre-test and post-test. It also explains the normality test and Shapiro-Wilk test used in the study to prove and give valid and reliable statistical influences for the research work. The chapter presents the pilot study design and procedures before the main study. It details classroom observation and its checklist, which includes certain criteria that were taken to ensure the reliability, validity, and trustworthiness of the results generated in the current study. The chapter justifies the reason for each test and ends with the limitations of the tests used to avoid undue interpretations.

### **3.1 Study Design**

The current study employed a mixed-methods approach, integrating both quantitative and qualitative assessments of validity and reliability (Creswell & Creswell, 2017). It presents the measures taken, namely, the pilot study, the experimental design, a questionnaire addressed to the participants after the treatment, and the classroom observation.

Prior to carrying out the main study and using the data collection instruments, the researcher conducted a pilot study. Its aim was twofold: first, to assess the study design, and second, to evaluate the efficiency of the data collection instruments.

We adopted an experimental design to investigate the effectiveness of implementing medical discourse to enhance EFL learners' lexical competence during the COVID-19 pandemic. The design was chosen due to the nature of the topic, which is vocabulary knowledge. Nation (1994) agrees that a strong vocabulary enhances the abilities of listening, speaking, reading, and writing (p. viii). The COVID-19 pandemic has brought forth a range of new vocabulary and terminology associated with the virus. Hence, introducing medical terms to EFL learners is an urgent necessity because they struggled to produce a piece of communication in health care crisis-related topics in response to COVID-19 pandemic-generated impacts. This educational issue may be due to their poor and not well-developed lexicon. It is now understood that lexis is a crucial aspect of learning a language. Lack of comprehension might make learners feel frustrated on account of finding it difficult to express themselves when communicating in the target language. Folse (2004) emphasizes that while poor grammar may be manageable, inadequate vocabulary significantly hinders communication. You can manage without grammar, but you cannot manage without vocabulary (p. 2). Communicating in a foreign language with relative ease is primarily based on rich and relevant vocabulary knowledge. The experimental design allows manipulating the independent variable (i.e., medical discourse) to assess its influence on the dependent variable (i.e., learners' lexical competence).

### **3.2 Study Context**

The treatment classes in the present study was a blended way, i.e., the researcher posted via Moodle platform two videos and an article entitled "Recognizing Day to Day Signs and Symptoms of Coronavirus", "How COVID-19 Affects the Lungs", and "COVID-19: A Challenging Pandemic" respectively. Additionally, students had seen two

different videos and another different article related to the COVID-19 pandemic. They are entitled as follows:

“The Story of Coronavirus”, “Flu, Pneumonia and COVID-19”, and “Coronavirus,” respectively. The personal computer (PC) and data show were used in class to run the sessions and attract the attention of first-year learners.

Moreover, students were asked to use their accounts on the official platform provided by the Algerian Ministry of Higher Education and Scientific Research, Moodle, for the sake of sharing the posted videos and articles. Equally important, the researcher shared these videos via email and messenger in case students fail to download them from Moodle platform or for any unexpected technical problem.

### **3.3 Choice of the Method**

The outbreak of COVID-19, which lasted for three years, has resulted in the acquisition of new terminology, including chunks and lexis associated with the virus. Since lexis can occasionally permeate all language skills, it is crucial to EFL learners' language ability. That is to say, oral expression teachers value lexis because it is one of the most critical aspects of learning a foreign language; that is, lexis is a necessary building block of language and language development.

Many scholars, including McCarthy (1990), emphasize the importance of vocabulary over grammar in communication, stating that without a broad vocabulary, meaningful expression in a second language is impossible. This perspective has led to the emergence of the lexical approach, which posits that “language consists of grammaticalized lexis, not lexicalized grammar” (Lewis, 1993, 34). For Lewis, language consists of chunks of words that have their grammar and are ready for use. Several studies emphasize lexis in

EFL classrooms, which came with evidence that lexis constitutes a major part of everyday language and can enhance learners' fluency and communication.

This study arose from the impact of the COVID-19 pandemic, which led EFL teachers to engage learners in discussions about related topics, introducing essential vocabulary such as pandemic, epidemic, containment, and lockdown. While vocabulary knowledge is crucial for language proficiency across all skills, many learners struggle to communicate effectively about healthcare and crisis topics. Understanding a word involves its pronunciation, spelling, morphology, grammar, contextual and cultural meanings, and usage, including idioms and discourse style (Hamer, 1990, as cited in Nation, 2001). The pandemic highlighted the need for individuals, regardless of their educational background, to grasp key terms related to healthcare, prompting the researcher to explore ways to enhance EFL learners' lexical competencies, particularly as first-year students struggled to discuss the pandemic and related issues.

Cohen, Manion, and Morrison (2017) stated that research methods in educational research are employed to collect data for inference, interpretation, explanation, and prediction, allowing for a thorough examination and discussion of the problem at hand. For that reason, the research is based on the "Mixed Method", as the nature of the issue requires. Tashakkori and Teddlie (2010: 11) used the acronym MMR, which stands for "Mixed Method Research", which states that "the [...] characteristic of MMR *is a reliance on visual representations [...] and communicational system*. MMR [...] can simplify the complex interrelationships among elements". The mixed method is used when the study involves the mixing of qualitative and quantitative approaches.

The mixed method was chosen for the present study because the researcher com-

bined the following: first, the experimental design; second, a classroom observation; and third, a questionnaire. Integrating quantitative and qualitative data collection and analysis enhances triangulation, providing a more comprehensive understanding of the research problem and enriching study conclusions. As Creswell and Clark (2007, p. 9) noted, mixed methods research offers stronger evidence than using either approach alone. Dencombe (2017, p. 272) emphasized that this combination increases data accuracy and offers a fuller picture of the phenomenon, addressing the limitations of single methods. Johnson *et al.* (2007, p. 123) defined mixed methods as combining qualitative and quantitative approaches to achieve greater breadth and depth of understanding.

The mixed-method approach enriches the study by enabling the collection of both qualitative and quantitative data. Qualitative data is gathered through classroom observations, providing in-depth insights into participants' actual experiences. The quantitative data is obtained from the questionnaire and experiment, which provide numerical measures and statistical analysis. By combining these many data sets, the researcher can strengthen the validity of the obtained results, triangulate the findings, and develop a deeper comprehension of implementing medical discourse to enhance EFL learners' lexical competence during and after the COVID-19 era.

### **3.3.1 The Experiment Design**

The main goal of the investigation is to enhance EFL learners' lexical competence by introducing medical terms to first-year EFL learners. In this way, it is possible to enrich their dictionaries with medical terms due to the COVID-19 pandemic and the urgent shift to using medical jargon among laypeople to discuss their personal and common situations. This research utilized an experimental design, manipulating an independent

variable to observe its effect on a dependent variable while controlling for confounding factors such as shyness, anxiety, and cultural differences. Participants were randomly assigned to experimental and control groups. Methodologists argue that experimentation is the best approach to address questions in language learning and teaching (Brown & Rodgers, 2002, p. 195). The experiment design is based on three important pillars: first, randomization, which means that the participants are randomly assigned to groups to minimize biases and ensure that any observed effects are more likely to be attributable to the manipulation of the independent variable. As in this current research, the participants are randomly chosen from the class of first-year learners at the Department of English. Second, randomization, which means every student who participates in the study has an equal chance to be selected. Hence, the selection of the sample subjects has given an equal chance to first-year EFL learners to be in either the control group or the experimental group. For the study, the researcher resorted to intact groups made up of the enrollment section of the Department of English. Third, The experimental design includes a control group that does not receive the treatment, allowing researchers to compare its effects against a baseline to accept or fail to accept the null hypothesis.

### **3.3.1.1 Objectives of the Experiment**

Vocabulary knowledge is crucial for EFL learners' language proficiency, impacting all language skills. Teachers emphasize its importance in oral expression, as lexis is a key component of language development. Therefore, introducing medical discourse to first-year EFL learners at MKUB is essential to enhance their lexical competence, especially since students struggled to discuss the pandemic. Shedding light on this new topic to be addressed in the oral expression module and investigating this area to enhance first-year EFL learners' lexical competence is considered as a challenging step. This is

especially so with the new situation of learning during the pandemic, which lasted for two years (2021 and 2022) to promote communication, exchange, and discussion on topics related to the crisis, virus, pandemic, vaccination, and other aspects of medicine and healthcare.

The general goal of this research was to expose first-year EFL learners to listening/watching videos and reading texts about pandemics, healthcare and medicine topics to enrich their vocabulary and help them develop their lexical competencies inside and outside classrooms. Therefore, the current study intends to determine whether the treatment has a positive effect on first-year EFL learners' lexical competence throughout the experimental design.

### **3.3.2 The Classroom Observation**

One of the most important ways to research and evaluate education is through classroom observation. The present study depended on classroom observation to measure and evaluate the quality and effectiveness of teaching medical discourse to first-year EFL learners at MKUB. It mainly focused on learners' performance after the treatment rather than before it since learners apologized for not performing because they did not have enough information and sufficient vocabulary related to the suggested topics (See Appendix E). This is mainly because learners had very poor vocabulary related to medical discourse, health care, and crises like COVID-19. The observation relied on field notes and their interpretations. Hence, classroom observation allowed the researcher to observe the behaviour being studied in the present study and to determine the extent to which first-year EFL learners use vocabulary related to COVID-19. It highlighted how much correct information about COVID-19 and other diseases and how first-year EFL

learners can communicate about people's protecting themselves during crises.

The classroom observation was administered using the checklist, which was used mainly to check the development of first-year EFL learners through the use of medical vocabulary and smooth communication among them about COVID-19 and health care during and after the crisis.

### **3.3.2.1 Checklist**

Checklists are highly helpful tools in research as they are made by teachers/ researchers to help students measure their learning development. They are often extremely simple and basic scaffolds that help EFL learners build their meta-cognition, gain confidence, and finally become autonomous. Both teachers and learners can use checklists in learning assessment. Oscarson argues that instructors and students alike may benefit from increased self-awareness and autonomy in the areas of planning, monitoring, and assessment when given the chance to develop these skills (2009, p. 39). For Oscarson, teachers can use checklists to assess their learners and regulate their plans when doing research. In addition, students can also use them in their learning, which offers them the opportunity to be more confident and autonomous.

The researcher used the checklist to assess learners' vocabulary usage and awareness of COVID-19 and vaccination. It is in the form of a table to compare the performance of the experimental and control groups after the treatment. It focused on correct medical terminology usage, discussing pandemic-related topics, and understanding vaccination concepts. The comparison is made for the sake of comparing the learners' performance use of vocabulary related to COVID-19 and their awareness about the pandemic and vaccination, especially during and after the COVID-19 era. The analysis was qualitative,

allowing for a nuanced understanding of learners' lexical competence and awareness. The findings provide insights into the intervention's effectiveness and suggest areas for improvement in EFL learners' engagement with health-related vocabulary. The checklist is available in the appendices (See Appendix G).

### 3.3.2.2 Description of the Checklist

To reinforce the data collected, the researcher observed the participants in their oral performances about COVID-19 and the pandemic during all sessions, which took place for two weeks at MKUB. Each observational session lasted approximately 50 minutes. The focus was on observing the EFL process in using medical terms, i.e., new vocabulary about healthcare and pandemics, from the learners' self-confidence and attitudes towards the topic itself. The observation was done relying on a checklist and a detailed classroom observation report.

The checklist (see Appendix G) of the present study was in the form of table 3.5 (3.8.1.1 The Classroom Observation Checklist title), which consists of six characteristics related to the participants' communication, engagement and confidence in discussing topics related to health care, COVID-19, and the pandemic. The characteristics include the following points: poor communication about the pandemic, confusion when explaining or providing comments about related articles or videos, difficulty using appropriate words in COVID-19-related sentences, learners' dependence on the online debate which occurred among learners in the chat room on Moodle, and self-confidence when performing topic about the pandemic. The "✓" column indicates that the characteristic was observed, and the "✗" column indicates that the characteristic was not observed. The number of participants was 15 participants. The observer was required to tick the corresponding columns

for each observed or not observed aspect.

### **3.3.2.3 Validity of the Checklist**

After forwarding the checklist to the supervisor and other experts from the Department of English at MKUB to correct it and provide feedback/suggestions concerning the characteristics included, the supervisor and the experts validated it and found the characteristics are well chosen and well elaborated especially the three last ones: the difficulty of using appropriate words in COVID-19 related sentences, learners' dependence on the online debate which occurred among learners in the chat room on Moodle, and self-confidence when performing topic about the pandemic. One of the experts recommended adding a report about classroom observation. Consequently, a report was made that included three basic items: the use of ICT to facilitate the presentation of medical terms, the interaction between first-year EFL learners about health care and pandemic topics, and the use of the Moodle platform during online learning.

## **3.4 The Population and Sampling**

The Department of English Language and Literature at MKUB has a population of (N=445) first-year students divided into 14 groups. The intact group under the researcher's direction comprised an experimental group of (n=15) students and a control group of (n=15) students. The researchers chose first-year students for their exposure to various topics in core modules, such as written expression, reading, listening, and oral expression. The study aimed to enrich first-year EFL learners' vocabulary in various topics like food, culture, shopping, travel, school, and work. However, the COVID-19 crisis impacted teaching methods in higher education, particularly in EFL classes. The necessity of involving health and medicine topics in the study was believed to be a new way of

oral expression for these learners, helping them grasp new vocabulary and enhance their communicative competencies.

### **3.4.1 Sample and Sampling Techniques**

Sampling is a method of selecting a population group for a research study, and a more representative sample is more likely (O’Leary, Z., 2017). In this study, the researchers randomly assigned (n=15) participants to an experimental and (n=15) control group during the pandemic (2021-2022). The participants received treatment for two months to improve their lexical competence, which involved posting videos and texts about COVID-19 via the Moodle platform, presenting them in class, and undergoing a pre-test and post-test. After the treatment, participants were given a questionnaire to identify their attitudes toward introducing medical terms in oral sessions during the pandemic to enhance their lexical competence. The study emphasizes the importance of random selection in research studies.

It is important to provide justifications for why a small sample (n=15) was used in the current study. Certain challenges took place during the COVID-19 pandemic when the administration obliged teachers to teach small groups to avoid the spread of the epidemic as a reaction to the crisis of Coronavirus. This caused what was called learners’ rarity, which made it challenging to obtain a large sample. Hence, the researcher was obliged to deal with this small number. It is crucial to be transparent about the limitations and recognize that the findings of the present study are limited to this small sample, and statistics are relevant to this research only.

### 3.5 Outline of the Study

As mentioned earlier, the study was conducted in the first term of February 2022 of the 2021/2022 academic year. The study adopted a mixed method approach where we used the experiment design, learners' questionnaire, and classroom observation. It comprises three phases: the pre-experimental phase, the experimental phase, and the post-experimental phase. The pre-experimental phase included the pilot study, which allowed the researcher to examine the study design and test the effectiveness of the data-gathering tools. It contains three main parts: its design, procedures, and how it was implemented in the main study. The experimental phase included the pre-test, the treatment, and the post-test. The pre-test and post-test were addressed for both the experiment group and control group; however, the treatment was addressed only to the experiment group, which lasted for two months for the sake of enhancing their lexical competence. It was done in a blended way, i.e., posting videos and texts about COVID-19 to them via the Moodle platform. Then, different videos and texts but about the same topic were used in class. The post-experimental phase included a questionnaire addressed to the participants of the experiment group to determine the participants' perceptions towards introducing medical discourse to EFL classes. In addition, a classroom observation was made to check the participants' oral presentation and assess their lexical development in the area of medicine and health care.

It is worth mentioning that the participants of both control and experiment groups were randomly selected from a population of 445 first-year EFL learners, who were divided into 14 groups. Both the control and experiment groups consisted of 15 learners. The small number was due to the effect of the COVID-19 pandemic. The following title

provides information about the participants of each group.

### 3.5.1 Profile Information of the Participants

Tables 3.1 and 3.2 summarize information about the participants of the control group and experiment group in the study, including their gender, age, and scores in the pre-test and post-test in general. Before starting the treatment, first-year EFL learners were asked to provide answers to three different activities related to COVID-19 and medical terms: the pre-test. The participants were asked to do three other activities after the treatment, the post-test.

The three vocabulary activities were related to medical discourse in general and COVID-19 in particular. Each was worth ten points ( /10), and  $\Sigma$  means the total scores achieved by each participant in the pre-test and post-test.

**Table 3.1**  
**Profile Information of Control Group Participants**

Participants	$\Sigma$ Score/30 (pre-test)	$\Sigma$ Score/30 (Posttest)
Student N° 1		
Student N° 2		
Student N° 3		
Student N° 4		
Student N° 5		
Student N° 6		
Student N° 7		
Student N° 8		
Student N° 9		

Student N° 10  
 Student N° 11  
 Student N° 12  
 Student N° 13  
 Student N° 14  
 Student N° 15

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Table 3.1 summarises information on the control group participants in three columns. The first indicates the participant's unique number instead of his/ her name. The second is for the total scores gained in the pre-test out of 30 points. The third is for the total scores gained in the post-test out of 30 points. We mentioned that the participants had passed three activities each out of ten points ( / 10) and the 'Σ' symbol represents the total of each participant's results on the relevant tests.

**Table 3.2**  
**Profile Information of Experimental Group Participants**

Participants	Σ Score/30 (pre-test)	Σ Score/30 (Post test)
Student N° 1		
Student N° 2		
Student N° 3		
Student N° 4		
Student N° 5		
Student N° 6		
Student N° 7		
Student N° 8		

Student N° 9  
Student N° 10  
Student N° 11  
Student N° 12  
Student N° 13  
Student N° 14  
Student N° 15

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Table 3.2 summarises information on the experimental group participants in three columns. The first indicates the participant's unique number instead of his/ her name. The second is the total scores gained in the pre-test out of 30 points. The third is for the total scores gained in the post-test out of 30 points. We mentioned that the participants had passed three activities each out of ten points ( / 10), and the 'Σ' symbol represents the total of each participant's results on the relevant tests.

It is important to shed light on the three distinct vocabulary activities covering COVID-19 in particular, as well as medical discourse in general, which make up the vocabulary-related activities. In the first multiple-choice test, first-year EFL learners were given three options, only one of which was the right answer. In the second test, which involved matching, they had to read the definitions presented and match the terms with the correct definitions. In the third test, which focused on gap filling, the participants had to complete the missing sentences in a paragraph regarding COVID-19 (the three activities are well explained in the coming sub-title where we elaborated the content of each part: pre-test, treatment, and post-test).

### 3.5.2 Data Collection Procedures for the Main Study

The main study was conducted during the COVID-19 pandemic in February 2022, the first term of the academic year 2021/2022, when students studied in a blended way. Students had two types of learning: online and face-to-face education. The first week was for the former type of learning; however, the second was for the latter one. The virtual or electronic classroom was via the Moodle platform, the official Algerian platform among all Algerian universities, which was in the first week, and the face-to-face classroom was in the second week. The new way of learning during the pandemic, which is known as Blended learning (BL), defined as the combination of face-to-face and online instruction (Graham, 2013), is increasingly embraced in higher education. Some scholars describe it as the “new traditional model” (Ross & Gage, 2006, p. 167) or the “new normal” in course delivery (Norberg *et al.*, 2011, p. 207).

During the pandemic, the researcher was obliged to teach the participants oral expression using this blended approach. First-year EFL learners received videos related to Coronavirus via the Moodle platform and subsequently watched additional videos on the same topic. To enrich their vocabulary concerning COVID-19, medical discourse, and healthcare during crises, they were also assigned various activities. Following this, participants were asked to choose one of six suggested topics for their presentations.

The presentation topics included: 1) Why should there be a global effort to detect and stop COVID-19? 2) How do past and present pandemics compare? 3) How did the United States initially respond to the pandemic? 4) Discuss: “During the pandemic, everyone has a role to play in stopping the spread of disease?” 5) How has COVID-19 impacted life around the world? 6) What causes a disease to become a pandemic? The

following table summarizes the stages of the data collection procedures of the main study.

**Table 3.3**  
**Data Collection Procedure of the Main Study**

		Note. /: No treatment F-2-F: face-to-face		Groups of Study	
Stages	Weeks	Classes	Experimental Group	Control Group	
Pre-training	Week 0	Class 1	Pre-test	Pre-test	
During intervention (Training Classes)	Week 1	Class 1	Online Training (video 1 + 2)		
		Class 2	- Discussing the videos		
		Class 3	- Questions and Answers	/	
		Class 4	- Summary of the videos (oral one: videotape or audiotape)		
	Week 2	Class 5	F-2-F Training (video 3 + 4)		
		Class 6	- Discussing the videos		
		Class 7	- Questions and Answers	/	
		Class 8	- Listing vocabulary related to the COVID-19 and pandemic - Summary of the videos (oral one + immediate feedback)		
Post Training	Week 3	Class 1	Post test	Post test	
		Class 2	- Oral performance		
		Class 3	- Oral performance	/	

Table 3.3 represents the data collection procedure of the main study, which shows that the research work depends largely on the quasi-experimental design. This last one requires a pre-test and a post-test for both the experimental group and the control group.

Table 3.3 shows that both tests were given to the control and experimental group students before and after the treatment. The treatment was addressed only to the experimental group of students, which took time for eight blended sessions: four online sessions and four face-to-face sessions. During the treatment, students were asked to listen to videos their titles mentioned before: 1) Recognizing Day-to-Day Signs and Symptoms of Coronavirus, 2) How COVID-19 Affects the Lungs, 3) The Story of Coronavirus, and 4) Flu, Pneumonia and COVID-19. These videos lasted for 3 minutes and 50 seconds, 2 minutes and 20 seconds, 3 minutes and 58 seconds, and 4 minutes and 3 seconds, respectively.

Additionally, the first video was about providing learners with most signs of COVID-19 from day one until day fourteen. That is, providing learners with a huge number of nouns and adjectives related to COVID-19. The second one was about explaining the breathing system of human beings and how it got affected by the virus. Those two first videos were posted online via both an email and Moodle platform, i.e., online learning. At this level, learners were asked to watch them and answer some questions via the platform. Later, the learners were asked to summarize the videos by recording themselves and then sending them to the teacher since they were studying in a blended way. The aim behind asking learners to summarize the posted videos was to guarantee that they had watched them, knew their content, and grasped new terms related to the topic. The third video was about providing learners with the definition of COVID-19 and how it spread among people. It also provided information on how people became infected with the virus and showed ways of protection. The video provided an example of an infected person with COVID-19. The last video was about providing learners with the definitions of the flu, pneumonia, and COVID-19 so they could discriminate between them.

Moreover, it showed the common symptoms of the three terms and explained rare

and severe cases. Yet, more importantly, the video provided people with the needed information about when to ask or seek medical help. Those two last videos (3 and 4) were in face-to-face learning. That is, learners had to answer certain questions about the videos and summarize them in class to use most of the provided vocabulary related to the topic and memorize them. In addition, first-year EFL learners had immediate feedback missing in the online classroom. Because the treatment took place during the pandemic period, the time allotted to each session was 60 minutes instead of 45 minutes.

As mentioned earlier, the present study is based on the experimental design, and it aims to examine the effectiveness of implementing medical discourse to first-year EFL learners to enhance their lexical competencies by providing them with appropriate videos in a blended way. It was expected through the study to help learners enrich their lexicon within a specific domain, which they had almost no idea about, i.e., medicine and health-care during pandemics and crises. Students with rich vocabulary and a well-developed lexicon about medicine and health care can communicate on different topics and succeed in social interaction. It also raises their awareness of the pandemic and vaccination, especially during and after the COVID-19 era.

### **3.6 Pre-Experimental Phase**

This phase involved the pilot study, which allowed the researcher to test her research protocols for first-year EFL learners. It includes assessing the effectiveness of teaching methods, materials, and assessment tools before implementing them in the main study. The pilot study involves three parts: its design, procedures, and implementation in the main study.

### **3.6.1 Pilot Study**

The researcher carried out a pilot study before conducting the main investigation and using the data-gathering tools. The pilot study was conducted for two main reasons: (1) to examine the study design and (2) to test the effectiveness of the data-gathering tools. For the former reason, the pilot study was expected to demonstrate the extent to which the present research was feasible. What is more, by testing the treatment materials and showing how important MD is for first-year EFL learners to enrich their vocabulary and develop their communicative competencies. For the latter reason, the researcher endeavored to conduct a pilot study to gauge the effectiveness of the tools employed in data collection, including exercises related to vocabulary (i.e., MD: COVID-19), a questionnaire, role play, reading texts related to MD, and classroom observation. The following subtitles of this chapter explain the design, procedures, and methodological implications of the pilot study.

#### **3.6.1.1 Pilot Study Design**

Six EFL learners took part in the pilot study, which is divided into two parts; the first part is related to vocabulary activities related to medical discourse and COVID-19, and the second one is a questionnaire. The former lasted for thirty minutes (30 minutes) and the latter for ten minutes (10 minutes). The activities related to vocabulary are three different tests of vocabulary about medical discourse in general and COVID-19 in specific. That is, the first test was about multiple choice, where learners were given three options, of which only one option was correct. They had to decide which option was the correct one. The second test was related to matching, where students were asked to read the provided definitions and match them with the given terms with the appropriate defini-

tions. The third test was about gap filling, where students were asked to fill in the gaps in the paragraph about COVID-19. The teacher avoided giving more than one possibility to learners for the sake of avoiding ambiguity in the gap-filling test.

Moreover, learners participated in answering a given questionnaire, which contains seven questions. The first six questions are close-ended, and the seventh question is a multiple-choice close-ended question. These questions were made to obtain exact data to be analyzed since the present topic, which is related to medical discourse and COVID-19 is considered a new and updated topic. Last but not least, students were asked to choose one of the two proposed topics (1-“How has COVID-19 impacted life around the world? 2-What causes a disease to become a pandemic? to perform them in pairs. The pilot study took place at MKUB in an EFL class where participants were working individually, and they had thirty minutes (30 minutes) as the allotted time.

### **3.6.1.2 Pilot Study Procedures**

The pilot study took place in November 2020; that is, it took place during the pandemic period when all Algerian universities shifted to blended learning because of the widespread COVID-19 virus. It was almost two months before the main study. The way of studying during the pandemic was as follows: students were divided into two waves: wave one and wave two. The former included students in their first and second year; however, the latter included students in their third year, master one, and master two. The way of studying was interchangeable, i.e., wave one studied for a whole week in classrooms (face-to-face learning); however, wave two studied electronically using the Moodle platform, the official electronic platform in Algerian universities) to receive lectures, exercise and homework (online learning). The week after, the two waves exchanged; that is, wave

two was studied face-to-face and wave one was studied online. By the end of the pilot study, students were asked to choose one of the given topics; the first was about: “How has COVID-19 impacted life around the world? And the second one was about “What causes a disease to become a pandemic? The time allotted to them was ten minutes (10 minutes).

The outcomes of the pilot study were not measured because the participants were struggling with time and claimed it was not sufficient to write their answers down on paper. Hence, we had almost empty papers, so we made certain modifications to avoid this problem when dealing with the main study.

### **3.6.1.3 Tests’ Principles**

Important topics covered in this section include bias, validity, and reliability as they pertain to educational research. When conducting pilot research, it is important to follow these guidelines to ensure that the testing instruments reflect the participants’ actual abilities and viewpoints. To keep things fair and unbiased, we ensured that the findings were representative. Evaluating and integrating these concepts was part of the pre-experimental phase, which aimed to make the study more rigorous and relevant.

#### **3.6.1.3.1 Reliability**

Reliability, in the Cambridge dictionary, is defined as the quality of being able to trust or believe in something or someone due to their consistent, expected behaviour or performance. Test reliability is crucial in addressing test use issues. It refers to the consistency of a test’s measurement of a concept or competency. Test errors depend on the test’s reliability and estimation. A test should measure a particular concept or competency con-

sistently, assessing the learner's competency closely. It should also be a stable indicator of performance. Reliability can be increased by adding more items to the test, but practical limits exist due to administration time and student fatigue (pp. 17, 18).

In the present study:

- **Pre-Test and Post-Test:** The tests used to measure the lexical competence of EFL learners were designed to ensure consistent results if administered repeatedly under the same conditions.
- **Classroom Observation:** The checklist used during classroom observation was standardized to ensure that the same criteria were applied across different learners, minimizing variability in the evaluation process.

#### 3.6.1.3.2 Validity

The validity, by definition in the Oxford Dictionary, is “the state of being logical and true”. Heaton (1990) defines it as “a test should measure whatever it is supposed to measure and nothing else” (p. 12). The author emphasized the significance of validity in testing. He claimed a well-designed test should be free from irrelevant influences and effectively measure a specific skill or information it seeks to evaluate. For instance, a language proficiency test should assess language proficiency, not test-taker fear or irrelevant cultural information. Heaton showed the necessity of comprehensive test administration and design in real-world applications. Tests that do not follow this rule may produce unfair evaluations of learner's skills and misleading outcomes. The quote emphasizes how important it is that test content and expected outcomes line up.

The concept of validity has evolved significantly over time. One major trend is

the shift from a narrow understanding, focused mainly on criterion-related validity, to a broader perspective. This broader view now considers various factors, including traditional types of validity, such as content, face, criterion-related, predictive, concurrent, and construct validity. Additionally, it takes into account the test's outcomes from ethical and sociological standpoints (Renaud, 2004, p. 69). Valid tests offer insightful information about a learner's capabilities, directing instruction and assisting in the identification of problem areas (Lázaro, n.d., p. 12).

In the present study, we focused on three important points:

- **Content Validity:** The pre-test, post-test, and classroom observation checklist were carefully aligned with the study's objectives enhancing EFL learners' lexical competence in medical discourse. Experts in both EFL and medical discourse were consulted to ensure that the content of the tests accurately reflected the knowledge and skills required to communicate effectively on healthcare-related topics.
- **Construct Validity:** The experimental design was structured to measure whether exposure to medical discourse had an impact on learners' lexical competence, ensuring that the tests evaluated the relevant constructs.
- **Questionnaire Validity:** The post-experiment questionnaire, which gauged students' attitudes towards implementing medical discourse in EFL classes, was piloted and revised to ensure that it effectively captured their perceptions and experiences during the study.

### 3.6.1.3.3 Bias

Bias refers to the tendency for a test to give results that deviate from expected results consistently. It is often considered undesirable and should be eliminated from tests. A test is considered biased if its results consistently deviate from expected student abilities. While this is not significant to test developers and users, it becomes a serious issue when a test provides different results for different groups of people. If a specific group performs systematically worse, the test is considered biased against them. The concepts of fairness and bias are connected. If tests are valid, they should fairly assess the relevant concepts and abilities rather than other potentially irrelevant activities. (p. 19).

Inadequate learning opportunities rather than test-related problems may be the cause of biased outcomes in achievement testing. This might be linked to the quality of instruction given to students. This idea stems from the idea that some groups of learners need equal education opportunities. Saihi (2015) claimed that language biases, including those based on culture, gender, age, and religion must be avoided by researchers. (p. 28). Equity in instruction delivery, including teacher beliefs, should be comparable to that received by good test performers. However, extending bias to include test features and instruction characteristics requires a broader range of ideas to solve these problems (Baker, 1979, p. 23).

Test bias is a significant issue in formal testing, as it can lead to inferring learning from test performance. A learner's poor performance on a test does not necessarily mean they cannot, as they may not comply with testing requirements due to disaffection with school and its routine. Biased test results may be influenced by a student's willingness to play the game, respond on cue, and time in a testing situation. This decision is complex

and influenced by the student's belief in the test's worthiness, pleasant experiences, and the authority of the test (Baker, 1979, p. 23).

Several steps were taken to mitigate bias in this study:

- **Randomization:** Participants were randomly assigned to the experimental and control groups to avoid selection bias, ensuring that any differences in lexical competence could be attributed to the intervention rather than pre-existing factors.
- **Observer Bias:** During classroom observation, a structured checklist was used to reduce subjectivity in evaluations.
- **Test Bias:** Test items were reviewed to ensure that they were free from cultural or linguistic bias that could disadvantage any participants based on their background. For instance, care was taken to ensure that the medical terminology introduced was accessible to all learners, regardless of their prior knowledge.

By considering these principles, the study aimed to produce reliable and valid results while minimizing bias. This rigorous approach enhances the credibility of the findings, particularly when evaluating the impact of medical discourse on EFL learners' lexical competence.

#### **3.6.1.4 Implications of the Pilot Study on the Main Study**

Some changes were made to the main study because the primary goal of the pilot study was to review the study design and data collection tools and consider their effectiveness. These changes were made at the level of the following points: first, the time allotted to the three activities related to vocabulary, i.e., students at first had only 30 minutes to correct the activities; however, it changed to 45 minutes instead. The time

modification was made due to the feedback provided by the six students who participated in the pilot study, and all agreed that time was not enough to read and think about the correct answer. In addition, the approximate time for each activity according to the nature of the activity itself was taken into consideration. That is, activity N°1 was related to multiple choices that needed 10 minutes. Activity N°2 was associated with providing the appropriate term for the given definition, which needed 15 minutes. The last activity, N°3, was related to gap filling and needed 20 minutes to be solved by learners. In addition, the time allotted for the questionnaire of 10 minutes was changed to 15 minutes.

Additionally, from the questionnaire's piloting, it was obvious that the participants did not understand some questions. This was particularly notable when participants demanded explanations for some questions that sounded ambiguous to them. Therefore, some questions from the questionnaire have been reformulated. These changes were related to questions two (2) and three (3).

**Q2:** "Have you ever thought of tackling science topics like medical discourse?" became "Did you like the idea of discussing science topics then performing them like medical discourse?"

and:

**Q3:** "Did you like the idea of receiving videos/ texts related to medicine and health care outside the class?" became "Did you like the idea of posting videos or texts related to new topics like medicine, health care or crises for the sake bridging new vocabulary and key terms related to the topic?"

These were the changes made to how the training was to be delivered in the main study.

### **3.7 Experimental Phase**

This phase contains the pre-test, the treatment, and the post-test. The researcher started first by providing a detailed explanation of the experimental procedures. Then, the pre-test was conducted, which was addressed to both the control and experiment groups. After conducting the pre-test and collecting and assessing the participants' answers, these data were kept for analysis and interpretation using the SPSS program available in Chapter 4. After that, the control group had no treatment sessions; however, the experiment group received the treatment in a blended way. It is well explained in the next title, "experimental procedures". Accordingly, both the control group and the experimental group undertook a post-test to verify the effectiveness of implementing medical discourse to enhance EFL learners' lexical competence. The researcher collected and assessed the participants' answers; these data were analyzed and interpreted using the SPSS program (see Chapter 4 for more details). Then, the results of the pre-test and the post-test were compared.

#### **3.7.1 Experimental Procedures**

The experiment was carried out in three phases: the pre-test, the treatment, and the post-test.

##### **3.7.1.1 The Pre-test**

The pre-test was administered to both experimental and control groups, which were composed of 15 students each. The test was divided into three different exercises. Each of them was out of ten points (.../10).

The first exercise was about multiple choices, i.e., choosing the appropriate option

from a given list of choices. Students had five sentences that were related to the pandemic and COVID-19, and each sentence had three possibilities with only one correct answer. The student can receive two points whenever they opt for the right answer. For instance, the following question is taken from the given pre-test for the sake of explaining the experiment of the present study. which is most widespread? **a)** an outbreak, **b)** an epidemic or **c)** a pandemic. The basic aim of this exercise was to urge students to think very well about the given terms and then use their previous medical backgrounds to differentiate between the three terms. We tried to show the difference between them: An outbreak carries the same definition as an epidemic but is often used to describe an event more limited to a geographic area. The second term, “an epidemic”, is a disease that affects a large number of people within a community, population, or region. The third one, “a pandemic”, is an epidemic that spreads over multiple countries or continents.

The second exercise was about matching a word with its definition. This activity was out of ten points (.. /10) as well, and students were given 17 words with 17 different definitions. First-year EFL learners were asked to match only ten correct words with their correct definition. For each correct answer, the learner received one point. Here are three words with three definitions from the pre-test to show readers the activity:

**Contagious** → able to spread through contact with people or another living thing.

**Patient zero** → the person identified as the first to become infected with a disease in an outbreak.

**Transmission** → transfer of a disease from animal to human or from human to human.

This exercise aimed to provide students with two columns of words. The first included a group of isolated words, however. The second one involved a list of definitions or explanations for the previous list of words and asked them to match the word and its

definition. In this way, students were supposed to become good at practicing vocabulary, such as nouns, adjectives and meanings.

The third exercise was about gap filling, i.e., first-year learners were required to complete gapped sentences with words from a list. It was similar to the cloze test, which was an exercise in which the student was provided with a paragraph. The paragraph has missing words or blanks that had to be filled out. The blanks had a list of words above accompanying the given paragraph. The learner was asked to pick the right word that was similar to the meaning of the sentence and paragraph. The aim of gap-filling activity, as Scrivener (2005) stated, was for different purposes. It was done to test the students in verbs, nouns, adjectives, etc, related to COVID-19. The teacher avoided giving more than one possibility to learners for the sake of avoiding ambiguity. The teacher avoided giving more than one possibility to learners for the sake of avoiding ambiguity.

The last activity for first-year EFL learners was to present orally a topic related to COVID-19, but most of them refused to do that. They showed a willingness to master a topic related to COVID-19 or health care during a crisis. The time allotted to this activity was 60 minutes, and students were free to present it individually or in pairs (See Appendix C).

### **3.7.1.2 The Content of the Pre-Test**

At this stage, the samples, control group and experiment group learners were given the same type of exercises in the pre-test. That is, three different tests similar to the pre-test exercises addressed to the same participants: first-year learners. The first activity was about multiple choices, the second one was about matching terms with their definitions, and the third one was about gap-filling. Each activity was out of ten points.

The following are the three test exercises provided for first-year learners: control and experiment group learners.

**Activity 1: *choose the right option:***

1. People who show no signs of a given disease are:
  - Asymptomatic ✓
  - Unsymptomatic
  - Unsympathetic
2. What is a virus?
  - COVID-19
  - Influenza
  - Coronavirus ✓
3. What is a disease?
  - COVID-19 ✓
  - SARS-CoV-2
  - coronavirus
4. SARS-CoV-2 can —— humans.
  - Defect
  - Effect
  - Infect ✓
5. Which is most widespread?
  - an outbreak
  - an epidemic
  - a pandemic ✓(adjective)

The second exercise is about definitions and matching.

**Activity 2: *Match the terms with their definitions:***

**a. Community spread / b. Crises / c. Symptoms / d. Outbreak / e. Pandemic / f. Patient zero / g. Contagious / h. Social distancing / i. Virus / j. SARS-CoV-2 / k. COVID-19 / l. Hospitalized / m. Diagnose / n. Transmission / o. Isolation / p. Coronavirus / q. Symptoms /**

1. ....: able to spread through contact with people or other living thing.
2. ....: illnesses that are often not serious, but sometimes can be life-threatening.
3. ....: dangerous or unstable times or situations that demand attention.
4. ....: placed in a hospital for treatment.
5. ....: specific signs of illness or injury.
6. ....: separation of infected people from healthy people for serious contagious diseases like COVID-19.
7. ....: a sudden occurrence of a disease (or other unpleasant thing).
8. ....: occurrence of a particular disease throughout a whole country or the world.
9. ....: official name for the novel coronavirus disease that emerged in China in 2019.
10. ....: identify an illness by examining the symptoms.
11. ....: the person identified as the first to become infected with a disease in an outbreak.
12. ....: Severe Acute Respiratory Syndrome CoronaVirus 2; final official name for the coronavirus that causes COVID-19.
13. ....: practice of encouraging people to minimize contact and closeness, whether by banning large or even small groups/meetings (football matches, nightclubs), or by maintaining a minimum distance between people (for example one metre or two metres).
14. ....: a physical or mental feature that indicates illness/disease.
15. ....: transfer of a disease from animal to human or from human to human.
16. ....: a living thing, too small to be seen without a microscope, that causes infectious disease in animals and humans.
17. ....(noun): transmission of a disease directly within a community and not by importation from a foreign source.

(Here is the correction of the given activity: 1 → g. Contagious / 2 → p. Coronavirus / 3 → b. Crises / 4 → l. Hospitalized/ 5 → c. Symptoms / 6 → o. Isolation / 7 → d. Outbreak / 8 → e. Pandemic/ 9 → k. COVID-19/ 10 → m. Diagnose / 11 → f. Patient zero / 12 → p. SARS-CoV-2/ 13 → h. Social distancing / 14 → q. Symptoms / 15 → n. Transmission / 16 → i. Virus / 17 → Community spread).

**Activity 3: Gap filling:**

**Fill in the gaps with most suitable term: diagnostic / contagious / indoors / contaminated / spread / airborne / testing methods / transmits / virus / symptoms.**

COVID-19 ..... when people breathe in air ..... by droplets and small ..... particles containing the virus. The risk of breathing these in is highest when people are in close proximity, but they can be inhaled over longer distances, particularly ..... Transmission can also occur if splashed or sprayed with contaminated fluids in the eyes, nose or mouth, and, rarely, via contaminated surfaces. People remain ..... for up to 20 days, and can ..... the ..... even if they do not develop .....

Several ..... have been developed to diagnose the disease.

The standard ..... method is by detection of the virus' nucleic acid by real-time reverse transcription polymerase chain reaction (rRT-PCR), transcription-mediated amplification (TMA), or by reverse transcription loop-mediated isothermal amplification (RT-LAMP) from a nasopharyngeal swab.

**3.7.1.3 The Treatment**

The informants used in the experimental study were not the same as those used in the pilot study. They were exposed to the same treatment as the pilot study, with some changes in the main study due to the deficiencies found in the pilot study. That is, the experiment was blended: one week of online and another week of face-to-face learning. In addition, a text related to COVID-19 was posted to the informants to provide them with authentic texts related to pandemics and crises rich with lexicon related to the same domain.

The following table summarizes the treatment with the changes made in the pilot study.

**Table 3.4**  
**Procedure of the Experiment**

<b>Treatment</b>	Week 1: Online Learning	Class 1	Online teaching (video 1 + 2)
		Class 2	- Discussing the videos among students themselves in the chat space which is available on Moodle platform.
		Class 3	- Questions & Answers. - Summary of the videos (oral one: videotape or audiotape).
		Class 4	- Listing all parts of speech available in the text + sum-up of the text
<b>Classes</b>	Week 2: Traditional Learning	Class 5	F-2-F teaching (video 3 + 4)
		Class 6	- Discussing the videos.
		Class 7	- Questions & Answers. Summary of the videos (oral one + immediate feedback)+ using the gained vocabulary
		Class 8	of the text.

As mentioned in Table 3.4, the treatment phase was divided into two parts: on-line learning and face-to-face learning. The former was done via the Moodle platform and lasted for one week. During this period, the participants received two videos and a written text about COVID-19 and the pandemic. The first video is entitled “*Recognizing Day-to-Day Signs and Symptoms of Coronavirus*”, the second one is entitled “*How Covid-19 Affects the Lungs*”, and the text is entitled “*COVID-19: A Challenging Pandemic*”. Discussion about the posted videos and text was held in the chat room and made available on the Moodle platform. However, the latter was in the classroom. The traditional learning, i.e., face-to-face learning, lasted for another week, which lasted for four sessions. It should be noted that each class was allocated 60 minutes. During this period, the participants received only two other videos (videos N°3 and N°4) related to COVID-19. The third one is entitled “*The Story of Corona Virus*”, and the fourth one is entitled “*Flu, Pneumonia and Covid-19*”. During the face-to-face classes, the participants discussed different aspects of the content of the videos in the classroom and received immediate feedback not provided in the chat room available on the online learning, precisely

on Moodle platform.

#### 3.7.1.4 Content of the Experiment

The treatment of the experiment was made in the following way: posting two videos to learners via the Moodle platform. The first one was entitled “*Recognizing Day-to-Day Signs and Symptoms of Coronavirus*” and the second one was entitled “*How COVID-19 Affects the Lungs*”. Then, watching two other videos in traditional class; the third was entitled “*The Story of Corona Virus*” and the fourth was entitled “*Flu, Pneumonia and COVID-19*”. These videos took time of 3 minutes and 50 seconds, 2 minutes and 20 seconds, 3 minutes and 58 seconds, and 4 minutes and 3 seconds respectively. The content of each video is written in the present paragraph to show the available vocabulary related to the topic.

- **Video N°1: Recognizing Day to Day Signs and Symptoms of Corona virus**

Day-to-day symptoms of COVID-19 before proceeding, please note that this general overview is compiled for initial self-assessment only and may vary for each individual. If you're not feeling well, you should immediately consult a medical practitioner to have an accurate diagnosis and proper treatment of COVID-19. The typical daily symptoms are concluded from the study of 138 patients at Jiangyang Hospital of Wuhan University and another study involving 135 patients from Ginion Tan Hospital and 56 patients from Wuhan Pulmonary Hospital. These symptoms are broken down into: **Day 1 to day2:** The beginning symptoms are similar to the common cold, with a mild sore throat and neither having a fever nor feeling tired. Patients can still consume

food and drink as usual. **Day 3:** the patient's throat starts to feel a bit painful. Body temperature reads at around 36.5 degrees Celsius. Although it's uncommon other symptoms with mild nausea, vomiting or mild diarrhea are possible to set in. **Day 4:** throat pain becomes more serious. Other symptoms like feeling weak and joint pain start to manifest. The patient may show a temperature reading between 36.5 degrees to 37 degrees Celsius. **Day 5 to 6:** mild fever starts. The patient shows a temperature reading above 37.2 degrees Celsius. The second most common symptom, dry cough, also appears dyspnea or breathing. Difficulty may occur occasionally. Most patients in this stage are easily feeling tired. Other symptoms remain about the same. These four symptoms are among the top five key indications of COVID-19, according to the final report of the initial outbreak conducted by the Joint Mission of China and WHO. **Day 7:** The patients that haven't started recovering by day seven get more serious coughs and breathing difficulty fever can get higher, up to 38 degrees Celsius. Patients may develop further headache and. Body pain or worsening diarrhea, if there's any. Many patients are admitted to hospital at this stage. **Day 8 to 9:** On the eighth day, the symptoms are likely to be worsened for the patient who has coexisting medical conditions. Severe shortness of breath becomes more frequent. Temperature reading goes well above 38 degrees in one of the studies. Day nine is the average time when sepsis starts to affect 40 % of patients. **Day 10 to 11:** doctors are ordering imaging tests like chest X-ray to capture the severity of respiratory distress in patients. Patients are having loss of appetite and may be facing abdominal pain. The condition also needs immediate treatment in ICU. **Day 12 to 14:** for the survivors, the

symptoms can be well managed at this point. Fever tends to get better and breathing difficulties may start to cease on day 13. But some patients may still be affected by mild cough. Even after hospital discharge. **Day 15 to 16:** day 15 is the opposite condition for the rest of the minority patients. The fragile group must prepare for the possibility of acute cardiac injury or kidney Injury. **Day 17 to 19:** COVID-19 fatality cases happen at around day 18 before the time vulnerable patients may develop a secondary infection caused by a new pathogen in the lower respiratory tract. The severe condition may then lead to blood coagulation and ischemia. **Day 20 to 22:** the surviving patients are recovered completely from the disease and are discharged from the hospital.

- **Video N°2: How COVID-19 Affects the Lungs**

When you breathe, air flows in through your mouth and nose and down your Airways. Inside your lungs, the Airways ending clusters of air filled sacs. These air sacs are surrounded by tiny blood vessels. Here, oxygen from your lungs passes into your bloodstream. To get to tissues throughout your body, carbon dioxide is breathed out. COVID-19 is a disease caused by a virus called SARS Co V2. The virus infects cells along your Airways by attaching to ace two and other molecules on those cells. The virus uses ACE 2 as a door to get inside of the cells and make more copies of itself.

The virus and your immune systems reaction to it. Inflammation damages the air sacs, causing them to scar and stiffen or fill with fluid. This blocks some oxygen from passing from your lungs into your bloodstream. As blood oxygen levels fall, you may feel short of breath. In severe cases, a ventilator or other

support may be needed. Inflammation helps our bodies fight infection, but in some people with COVID-19, it seems to go into Over Drive.

Researchers think this may be due to the fact that the virus latches on to the ACE 2 molecule in order to get into cells. Ace two helps reduce inflammation, and this effect is lost when the virus occupies it. The result is that inflammation can go awry. NHLBI funded research over decades has helped us understand ACE two its role in inflammation and how it is hijacked by the virus. NHLBI is also supporting new studies, including clinical trials focused on developing safe and effective treatments for people infected with SARS Co V2. People with chronic lung, heart or blood diseases may be at higher risk of severe illness from COVID-19. We should all take steps to help protect ourselves and others from infection by washing hands, often avoiding crowded places, wearing a mask, and staying at least six feet away from other people.

Visit our website for the latest information and resources on COVID-19.

- **Video N°3: The Story of Coronavirus**

The new Coronavirus, too small to see, spread quickly from person to person, town to town and country to country to all corners of the world. Any one of us can catch it, spread it, and get sick.

When a person infected with Coronavirus breathes, talks, coughs or sneezes, tiny droplets with millions of harmful viruses spread into the air and land on everything nearby. Without realizing, the viruses enter our body. We breathe them in. They land in our mouth, nose and eyes. And we pick them up on our hands. Then touch our eyes, nose or mouth.

In these ways, the viruses enter our body and infect us. Most people don't get very sick with Coronavirus. We can have this virus and not know it. And easily pass it to others who pass it to more people. In a few weeks, a whole neighbourhood can get infected. Most people who get sick get better on their own. But some, especially the elderly and people who already have illnesses, can get very sick and even die.

Coronavirus spreads when people are close together. To protect ourselves and each other, we need to stay away from crowded and enclosed places and keep our distance. Wear our mask to protect others and ourselves. Keep our hands away from our face. Cover our cough or sneeze using our bent elbow. Wash our hands often and well with soap and water. And clean surfaces that are touched often with disinfectant to make them safe.

We were careful, but one day my mother got sick with a fever and a constant dry cough. She was very tired and achy. We called the nurse, she said my mother could have Coronavirus. Many people in our town were sick with this new virus. My mother needed to stay at home until she was completely well. To keep us safe, she had to wear a mask and stay apart from us. In case we had caught Coronavirus from my mother, we had to stay home 14 days so we wouldn't infect more people. A friend brought us food and supplies. We followed the rules. We avoided touching our faces, disinfected surfaces washed our hands often and kept our distance from each other. We opened Windows to let in fresh air and warm masks anytime we were near my mother. Days passed..... My mother got well and could no longer spread the virus. We fin-

ished our 14 days of staying home. Happily, we all remained healthy. Actions we took at home with our sick mother and when we were out in our community helps stop the spread of Coronavirus.

You can follow these actions and keep yourself, your family and your community safe too.

• **Video N°4: Flu, Pneumonia & COVID-19 Do You Know the Symptoms**

Lung illness can impact anyone at anytime.

The flu, pneumonia and COVID-19 are all contagious respiratory illnesses, which can be life threatening if left untreated. All three illnesses might require medical attention, but milder cases can be treated at home. Do you know the common symptoms and when to seek help?

Are you experiencing fever, cough, fatigue, and weakness? These three symptoms are all common with the flu, pneumonia, and COVID-19. Do you also have a shortness of breath, chest pain, or difficulty breathing?

These are common symptoms of COVID-19 and pneumonia. These may even be present with the most severe cases of the flu, especially in people with other health conditions. There are other symptoms that are common with just one or two of the illnesses.

⇒ Let's talk about the flu.

Flu symptoms will come on quickly. In addition to fever, cough and fatigue and weakness, the flu will often cause chills along with muscle and body aches and pains. You may also experience a runny nose and watery eyes, sore throat, and loss of appetite, similar to a cold.

⇒ Let's talk about pneumonia.

Pneumonia will often present with phlegm and mucus when coughing, in addition to shortness of breath, chest pain, fever, cough and fatigue.

⇒ Let's talk about COVID-19.

COVID-19 is something we are still learning about. What we know is that in addition to the common symptoms of fever, cough, shortness of breath, difficulty breathing, chest pain and fatigue, some people may also experience muscle and body aches, loss of taste and smell, headache, stomachache, diarrhea or vomiting, sore throat and chills. In severe and rare cases, people may experience pink eye rash or discoloration of fingers. Some severe cases of the disease may require medical attention, but most cases of the disease can be treated at home.

If you experience any of these symptoms, you should seek medical help right away. Fast breathing, difficulty breathing, shortness of breath, difficulty finishing a sentence or winded when speaking, blue or Gray skin color. Pain or pressure in chest or stomach, sudden dizziness, blue or Gray lips, confusion, dehydration, not peeing, unable to stop, vomiting, throwing up, not waking up. Not paying attention to anything. Crankiness, seizures.

Symptoms improve but then come back, such as a worsening cough or fever. Can't take a deep breath? Pain in your chest? Seek medical help immediately. Visit us at [www.lung.ca](http://www.lung.ca) to download your symptoms self-assessment checklist. If you are experiencing symptoms, please contact your doctor or other health care provider.

In addition to the above four videos posted, the participants received a text related to COVID-19 entitled “COVID-19: A Challenging Pandemic”. The reason behind providing the participants with this article was to urge them to read it and then make their personal summary which was shared among students themselves. In this case, learners exchanged vocabulary as well as information about the virus. The article is available in Appendix A.

### **3.7.1.5 The Post-Test**

The post-test was another test that contained three different tests similar to the pre-test addressed to the same participants: control and experiment group students. The first activity was about multiple choices, the second one was about matching terms with their definitions, and the third one was about gap-filling. Each activity was out of ten points. Additionally, the experiment group was able to perform the oral performance (an oral presentation) about the pandemic with a strong personality and rich speech with appropriate lexis related to the pandemic and COVID-19. However, the control group students showed a willingness to do so and considered the topic outside of their major, i.e., being EFL learners, not students of medicine.

### **3.7.1.6 The Content of the Post-Test**

At this stage, the samples, control group and experiment group learners were given the same type of exercises in the pre-test. That is, three different tests similar to the pre-test exercises addressed to the same participants: first-year learners. The first activity was about multiple choices, the second one was about matching terms with their definitions, and the third one was about gap-filling. Each activity was out of ten points.

The following are the three test exercises provided for first-year learners: control

and experiment group learners.

**Activity 1:** *choose the right option:*

1. The word “*quarantine*” comes from:
  - the number *40* ✓
  - the term *guarantee*
  - the fraction *quarter*
2. After showing symptoms he was told to ..... for 14 days.
  - Quarantine
  - Self-isolate ✓
  - Stay in home
3. A person with ..... of a disease may have that disease.
  - symptoms ✓
  - sign
  - a change
4. A disease that can be transmitted to humans from animals is:
  - Hypnotic
  - Stenotic
  - Zoonotic ✓
5. He was happy to learn that his mother tested ..... for this Coronavirus.
  - Negative ✓
  - Positive
  - Successfully

The second exercise is about definitions and matching.

**Activity 2:** *Match the terms with their definitions:*

a. Detect / b. Zoonotic / c. Vaccine / d. Person-to-person / e. Mask / f. Self-isolate / g. Immune / h. Lockdown / i. PCR test / j. Treatment / k. Coronavirus / l. Quarantine / m. Contagious / n. Epidemic / o. Pathogen / p. Test negative / q. Test positive / r. Viral

1. .... : any of group of viruses that cause respiratory infections and other.
2. .... : notice or discover the presence of something.

3. .... : protected from or resistant to something.
4. .... : describing a disease that can pass from person to person, usually by direct contact; describing a person with such a disease.
5. .... : describing a disease that can be transmitted from animals to humans.
6. .... : a substance used to protect humans and animals from a disease.
7. .... : if you take a test for an infection and you test negative, that means you do not have the infection. If you test positive, that means you have the infection.
8. .... : isolate oneself; put oneself in quarantine, away from other people.
9. .... : describing the spread of a disease from one person to another, typically through touch including shaking hands, kissing, sexual intercourse etc.
10. .... : isolation and monitoring of people who seem healthy but may have been exposed to an infectious disease to see if they develop symptoms.
11. .... : a micro-organism or germ such as a bacterium or virus that can cause disease .
12. .... : occurrence of a particular disease in a large number of people in a particular area.
13. .... : a piece of fibre or cloth that fits over the nose and mouth to protect other people from the wearer's germs and/or the wearer from germs in the air.
14. .... : official restriction of movement within or access to an area in the interests of public health.
15. .... : medical care given to a patient for an illness or injury
16. .... : describing something like, caused by, or relating to a virus or viruses.
17. .... : test that detects viral particles in blood or other body fluids.

(polymerase chain reaction)

(Here is the correction of this activity: 1 → / 2 → / 3 → / 4 → / 5 → / 6 → / 7 → / 8 → / 9 → / 10 → / 11 → / 12 → / 13 → / 14 → / 15 → / 16 → / 17 → / )

**Activity 3: Gap filling:**

pneumonia / organs / respiratory failure / breathing difficulties / hypoxia / infected / ongoing pandemic / taste / contagious / loss of smell / dyspnea /

Coronavirus disease 2019 (COVID-19) is a ..... disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The first known case was identified in Wuhan, China, in December 2019. The disease has since spread worldwide, leading to an .....

Symptoms of COVID-19 are variable, but often include fever, cough, headache, fatigue, ....., and ..... and ..... Symptoms may begin one to fourteen days after exposure to the virus. At least a third of people who are ..... do not develop noticeable symptoms. Of those people who develop symptoms noticeable enough to be classed as patients, most (81 %) develop mild to moderate symptoms (up to mild .....), while 14 % develop severe symptoms ( ....., ....., or more than 50 % lung involvement on imaging), and 5 % suffer critical symptoms (....., shock, or multiorgan dysfunction). Older people are at a higher risk of developing severe symptoms. Some people continue to experience a range of effects (long COVID) for months after recovery, and damage to ..... has been observed. Multi-year studies are underway to further investigate the long-term effects of the disease.

(Here is the correction: contagious / ongoing pandemic / breathing difficulties / loss of smell / taste / infected / pneumonia / dyspnea / hypoxia / respiratory failure / organs)

### 3.7.2 Normality Test in SPSS

Pre-testing and post-testing are measurement tools to evaluate students' development of the learning curve. The pre-test is conducted before the treatment to determine the baseline knowledge and skills of students, while the post-test is conducted after the treatment to measure the degree of learning that has occurred.

To give credibility to the study, a normality test is necessary for the current sample

( $n=15$ ), which is less than 30. A normality test is a statistical method used to determine if the sample ( $n=15$ ) follows a normal distribution or not. The normal distribution is also known as the bell curve. The obtained results are presented and analyzed in Chapter 4, which displays the data for each variable following a normal distribution and/or departures from normality. Researchers use normality tests to assess data. If the data conforms to a normal distribution, statistical techniques like t-tests provide more accurate results. By contrast, if the data significantly deviates from normality, the alternative statistical test might be more appropriate, such as the histogram and Q-Q plot, which provide a visual representation of the distribution of the obtained data, as explained in Chapter 4.

When dealing with the normality test in SPSS in the present study, the obtained results indicated three different results: 1) a normal distribution, 2) departure from normality, and 3) non-normality. Hence, the researcher needed to use the histogram or the Q-Q plot chart, which provides a visual representation of the distribution of the obtained data. A “detrended Q-Q plot chart” is a graphical tool that is used to assess the normality of a dataset by examining the distribution of data points against the quantiles of a normal distribution. Instead of choosing one tool, it is preferable to use both to make sure that the obtained results follow a normal distribution or not. All histograms and charts in Chapter 4 represent that the present dataset has a normal distribution, as explained and detailed in the chapter.

### **3.7.3 Analysis Procedures**

To ensure the validity and reliability of our experimental data, it is important to follow a logical sequence when analyzing the obtained data. First, the normality test for pre-test and post-test data of both the experiment and control groups. This is done by

using the Shapiro- Wilk test or the Kolmogorov-Smirnov test. Second, group statistics for pre-test and post-test data to calculate and report descriptive statistics (mean, standard deviation, etc.) of both groups. Third, independent samples t-test for pre-test and post-test data to compare the means of the experiment and control groups. This helps to ensure that any differences observed in the post-test are due to the intervention made in the present study. Fourth, a paired t-test for the experiment group (pre-test vs. post-test) was conducted to compare the pre-test and post-test means within the experiment group and see whether there was a significant change due to the intervention. Five, the hypothesis was tested to determine whether it was confirmed or failed to be confirmed. The questionnaire of the participants and classroom observation were finally analyzed.

By going through this order, we ensured that our data analysis was methodical and supported the validity of our experiment findings.

### 3.7.3.1 Principles of Normality Tests

Assessing whether the dataset is normally distributed is the basic principle of the normality test. The researcher uses both numerical and visual methods to test normality in the present study. Kolmogorov-Smirnov and Shapiro-Wilk Tests, mean with standard deviation, and paired samples test were used to represent a numerical database. Histograms and Q-Q Plots were used as visual methods to test normality. It is important to test normality as many statistical procedures, such as parametric tests and nonparametric tests. The process of the normality test is via setting up first a null hypothesis (**H<sub>0</sub>**) and alternative hypothesis (**H<sub>1</sub>**), second, choosing a significance level, third, computing the test statistic, and finally, comparing the result to a p-value or critical value to determine the null hypothesis. They are briefly explained below.

Null Hypothesis (**H<sub>0</sub>**) is utilized to assess the control group. It is worth mentioning that normality means that the data follows a normal distribution in that the curve bell is well-shaped. The null hypothesis of the current study is expressed as follows:

**H<sub>0</sub>**: If EFL oral expression students are exposed to medical discourse, they will not develop their lexical competence.

The alternative Hypothesis (**H<sub>1</sub>**) is used in case the null hypothesis is not confirmed, it is to formulate and test the alternative hypothesis. Interestingly, the alternative hypothesis (**H<sub>1</sub>**) is that the data does not follow a normal distribution. **H<sub>1</sub>** of the present study is as phrased as follows:

**H<sub>1</sub>**: If EFL oral expression students are exposed to medical discourse, they will develop their lexical competence.

Normality tests generate a ‘test statistic’ based on the properties of the data. Commonly used test statistics include the Kolmogorov-Smirnov test, Anderson-Darling test, Shapiro-Wilk test, histograms, and Q-Q plot chart, etc. For further discussion of the above tests, see Chapter 4.

The researcher chooses a ‘significance level’ (alpha, often set at 0.05) to determine the threshold to fail to accept the null hypothesis. If the *p*-value associated with the test statistic is less than the chosen significance level, the null hypothesis is to be rejected, which means that easing first-year students into medical jargon does not enable them to interact with pathologies and pandemics. The calculated significance value (*p*-value) makes the following conclusions:

- If  $\alpha \geq p\text{-value}$ , then the null hypothesis fails to be accepted.
- If  $\alpha < p\text{-value}$ , then the null hypothesis is accepted.

### **3.8 The Post-Experimental Phase**

In the post-experiment phase, the researcher evaluated the effectiveness of the treatment. Hence, the post-test was conducted for both control and experiment groups to assess the participants' development in their oral performances, taking into consideration the use of exact lexis related to the pandemic, medicine, and health care. Then, we compare their scores before and after the treatment. Additionally, we shed light on the participants' overall perception of introducing medical discourse to EFL classes via a questionnaire.

For the normality test with two independent variables, different tests were used: Shapiro-Wilk Test, Kolmogorov-Smirnov Test, Histograms, and Q-Q Plots. The two last tests were used to confirm that the obtained results are normally distributed because we obtained results indicating that a variable follows a normal distribution and sometimes departs from normality. That is, Histograms and Q-Q Plots were extra tests used to confirm normal distribution results.

#### **3.8.1 The Classroom Observation**

The present study depends on the classroom observation, another tool for collecting data that is usually seen to offer the researcher the opportunity to collect live data in the classroom, using a checklist during the post-test. The researcher interprets the results in the form of anecdotes. The researcher provides first-year EFL learners with helpful feedback and a clear understanding of what to look for in their presentations. This can be done through well-elaborated checklists to guide them during the assessment process.

Checklists can be simple or detailed, depending on the complexity of the research

project and the specific needs of the researcher. In the present study, we focus on implementing medical discourse to enhance EFL learners' lexical competence during the COVID-19 pandemic. Hence, we elaborated and adopted a checklist to improve the research efficiency and ensure the completeness and accuracy of the present study (as presented and explained in the previous title).

The researcher used a checklist as a tool for the observation. Such a data collection method, as explained in Cohen *et al.* (2007, p. 260), enables the researcher to understand the behavior being studied as it happens. The classroom observation mainly focused on six main aspects. The first aspect was about poor communication about the pandemic. The second one was about confusion when required to explain or provide comments about the article and/or videos. The third one was about the difficulty of using words appropriately in sentences related to COVID-19. The fourth was about learners using vocabulary from the posted videos and articles on Moodle. The fifth was about learners depending on the online debate among learners in the chat room on Moodle. The sixth aspect was self-confidence when discussing topics related to the pandemic.

### 3.8.1.1 The Classroom Observation Checklist

*Note: ✓: observed / ✗: not observed*

**Table 3.5**  
**Classroom Observation Checklist**

Aspects (not) to be observed	✓	✗	Participants (n = 15)
1. Poor communication about the pandemic			
2. Confusing when required explaining or providing comments about the article or/and videos			

3. Difficulty of using words appropriately in sentences related to COVID-19
  4. Learners use vocabulary from the posted videos and articles on Moodle
  5. Learners depend on the online debate which occurred among learners in the chat room on Moodle
  6. Self confidence when performing topic about the pandemic
- 

Table 3.5 represents a checklist that the researcher used during the observation after the treatment when the participants were asked to present orally a presentation related to COVID-19, healthcare, or medical topics. The checklist was used as an assessment tool to evaluate many aspects of the participant's interaction with the pandemic-related content. Below is an explanation of every aspect:

1. **Poor communication about the pandemic (✓/✗):** The researcher used this aspect to assess how well the participants communicated when they were asked to talk about pandemic-related subjects. A cross (✗) suggests poor communication, while a tick (✓) suggests strong communication abilities.
2. **Confusing when required explaining or providing comments about the article or/and videos (✓/✗):** The researcher used this aspect to highlight the importance of clarity in the participants' ability to explain or comment on articles and videos related to COVID-19. This component is used to evaluate the participants' capacity to offer concise justifications or commentary on pandemic-related publications or videos. Clarity is shown by a tick (✓), but confusion is indicated by a cross (✗).

**3. Difficulty of using words appropriately in sentences related to COVID-19 (✓/✗):**

The researcher used this aspect to assess how well the participants used proper vocabulary and chunks when they were asked to discuss COVID-19-related subjects. Proficiency in using appropriate lexis and chunks related to COVID-19 topics is indicated by a tick (✓) and difficulty in using appropriate terminology is marked by a cross (✗).

**4. Learners use vocabulary from the posted videos and articles on Moodle (✓/✗):**

The researcher used this aspect to measure to what extent the participants can grasp the educational videos and articles and use them in their pandemic-related conversations. A cross (✗) means failure to grasp lexis from the posted videos and articles; however, a tick (✓) means satisfactory integration.

**5. Learners depend on the online debate which occurred among learners in the**

**chat room on Moodle (✓/✗):** The researcher used this aspect to know to what extent the participants rely on online debates in a chat room on Moodle platform for discussions. This aspect is a sign of an interactive learning environment where the participants communicate with one another to share knowledge, ideas, and viewpoints on COVID-19-related topics. A tick (✓) indicates engagement in online chat, and a cross (✗) indicates non-engagement in online discussion.

**6. Self-confidence when performing a topic about the pandemic (✓/✗):**

The researcher used this aspect to assess the importance of effective and good communication and how confidently the participants can discuss or convey pandemic-related topics. A tick (✓) is used for participants who were comfortable talking about pandemic-related issues and were more likely to participate completely in conver-

sations and make significant contributions. However, a cross (✗) is used in the opposite situation.

The researcher accompanied the checklist, which contains six basic aspects to be observed with a checkbox for each. Then, the researcher collects the number of ticks and crosses and puts the exact number for each checkbox. They indicate whether or not the participants display the desired behaviour (✓) or not (✗) for each aspect. This checklist can be used as a tool for monitoring and evaluating participants' performance and engagement with pandemic-related topics.

### **3.8.1.2 The Classroom Observation Report**

The observation can be further analyzed through the classroom observation report (see Appendix F) to determine the significance of the observed items. It is based on three basic elements: first, the use of Information Communication Technologies (ICT) to facilitate the presentation of medical terms. Second, the interaction between first-year EFL learners about healthcare, COVID-19, and pandemic topics. Third, the use of Moodle platform during the online learning. The classroom observation checklist is presented below and its results are presented in the next chapter (Chapter 4).

## **3.8.2 Questionnaire**

A post-treatment questionnaire was addressed to participants to gauge their opinions about implementing medical discourse into EFL courses.

### **3.8.2.1 Aims of the Questionnaire**

Students in the experimental group were the only ones to receive a post-experiment questionnaire from the researcher. Chapter 4 has a table including the responses of all fif-

teen experiment participants who filled out the questionnaire. The survey consisted of seven closed-ended questions and was organized according to the guidelines provided in Appendix B. For the questions with multiple-choice answers, students were to use a Likert scale or simply mark the appropriate option (Yes/No). Since there is no room for rater bias in closed-ended questions, they are ideal for coding and tabulating (*Dörnyei, 2003, p. 35*).

All questions were set to show first-year EFL learners' perception of the implementation of medical discourse in EFL classes during the COVID-19 pandemic and how it affected their social interaction anywhere during crises, especially during the outbreak of Coronavirus. The first six questions were closed-ended, whereas the last one was based on a Likert scale. That is, it consists of a series of statements, all of which are related to self-evaluation; respondents are asked to indicate the extent to which they agree or disagree with certain items related to medical discourse and COVID-19 and other general topics like food, culture, travel, etc. by ticking (or circling) one of the responses ranging from 'strongly agree' to 'strongly disagree'. The questions were addressed to the participants to highlight important items related to the present study. These items are classified as follows: the first item is related to EFL learners' interests in medical discourse and health care before the pandemic. The second item is the need for new vocabularies related to the COVID-19 pandemic. The third one is about the participants' ability to produce vocabulary about medical discourse and health care. The fourth one is about participants' feedback on introducing medical discourse. The last item is related to participants' self-assessment of the development of their lexical competence by the end of the treatment.

### 3.8.2.2 Validity and Piloting the Questionnaire

Prior to the students' questionnaire being administered, it was sent to the supervisor for some comments and ideas regarding the questions contained. After some time, the supervisor offered some wise criticism and advised doing a pilot study with a small group of participants to assess the questionnaire's readability, usability, delivery, difficulty level, and item arrangement. As a result, the participants' feedback led to the elimination of certain items from the final questionnaire due to their perceived repetition or ambiguity.

Using Google Forms, we finalized the questionnaire and sent it out to our target population via email during the outbreak of the disease. Due to the hybrid nature of the students' classes, online submission of the questionnaire was required.

### Conclusion

The pilot study helped the researcher to reconsider the procedures for administering the main study. It paved the way for the present research work to be reliable and credible since it involved two study groups, experimental and control groups, to gain validity and reliability when testing the hypotheses. The treatment is to be considered; videos and an article related to COVID-19 and health care during crises were posted to first-year EFL learners, and different topics were given to them to develop their communicative competencies and succeed in their social interaction as well. Particularly during and after the COVID-19 era, it brings attention to the pandemic and the importance of vaccinations. The Statistical Package for the SPSS software was used to encode the test data. A variety of metrics are then computed, including correlation, standard deviation, t-value, p-value, and mean. Based on the results, we compared the experimental group

with the control group. The SPSS data was used to store the survey responses. The data collected from observing a classroom was organized using tabulation.

# **Chapter Four**

## **Data Analysis and Interpretation of the Results**

## **4 Data Analysis and Interpretation of the Results**

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Conclusion

## **Introduction**

The present chapter presents the results obtained through the following research instruments: descriptive statistics, T-tests (paired sample t-test and independent sample t-test), post-experiment questionnaire, and classroom observation. T-test results are encoded in tables using the SPSS program. The t-test interpretation is stated using the paired samples and independent samples procedures for their analysis. The results of the classroom observation checklist are encoded in the form of tables. In addition, the results of the post-experiment questionnaire are also encoded in the form of tables, which facilitates their interpretations and discussion.

### **4.1 Participants**

The study sample comprised thirty (30) first-year EFL learners during the first term of the 2021-2022 academic year, who were randomly assigned to an experimental group and a control group, each consisting of fifteen (15) learners. In the control group, the participants included three (3) males (20%) and twelve (12) females (80%). In contrast, the experimental group included five (5) males (33.33%) and ten (10) females (66.67%). The ages of the participants ranged from 18 to 20 years. To ensure anonymity, the participants' names were replaced with numbers.

#### 4.1.1 Profile Information of the Participants

**Table 4.1**  
**Profile Information of Control Group Participants**

Participants	$\Sigma$ Score/30 (pre-test)	$\Sigma$ Score/30 (Posttest)
Student N° 1	16	13
Student N° 2	20	14
Student N° 3	06	14
Student N° 4	09	07
Student N° 5	13	21
Student N° 6	15	11
Student N° 7	17	24
Student N° 8	04	08
Student N° 9	17	15
Student N° 10	07	15
Student N° 11	14	15
Student N° 12	02	16
Student N° 13	20	26
Student N° 14	16	14
Student N° 15	08	15

Table 4.1 displays participants of the study and their scores. The “Score/30” column represents scores of the control group participants on a test, with “Pre-test” indicating the scores before an intervention (or the treatment) and “Post-test” indicating scores after the intervention. As illustrated in Table 4.1, there are variations in scores for each student

between the pre-test and post-test. Specifically, some students demonstrate improvement in their scores from the pre-test to the post-test (e.g., Student No. 5, No. 7, No. 13), while others experience a decline in their scores (e.g., Student N°. 3, N°. 8, N°. 12).

Table 4.1 provides a snapshot of individual student performance and serves as a basis for assessing the overall effectiveness of the intervention. To draw more definitive conclusions, statistical analyses, such as calculating means and standard deviations and conducting normality tests and t-tests, are performed and discussed in the following sections.

**Table 4.2**  
**Profile Information of Experimental Group Participants**

Participants	$\Sigma$ Score /30 (Pre-test)	$\Sigma$ Score/30 (Post test)
Student N° 1	02	30
Student N° 2	08	30
Student N° 3	05	18
Student N° 4	05	20
Student N° 5	01	19
Student N° 6	09	30
Student N° 7	06	30
Student N° 8	16	30
Student N° 9	09	22
Student N° 10	14	30
Student N° 11	06	28
Student N° 12	04	24
Student N° 13	07	28

Student N° 14	19	30
Student N° 15	22	26

Table 4.2 shows the participants in the study and their scores. The “Score/30” column represents the scores of the control group participants on a test, with “Pre-test” indicating scores before an intervention (or the treatment) and “Post-test” indicating the scores after the intervention. As Table 4.2 shows, the pre-test scores vary widely, ranging from 1 to 22 out of 30. Some participants initially scored quite low, indicating a need for improvement. However, in the post-test scores, most participants achieved higher scores, and several reached the maximum score of 30. This suggests improvement in performance after the intervention (treatment). Participants who initially scored low in the pre-test showed substantial improvement in the post-test, indicating the effectiveness of the intervention. The obtained data in Table 4.2 presents overall improvement from the pre-test to the post-test, but further statistical analysis would enhance the interpretation of the results like paired t-tests.

## 4.2 Descriptive Statistics

The researcher utilized the SPSS program to enter the scores obtained from the pre-test and post-test for both the control and experimental groups. She organized the data collected from the main study involving 15 participants into frequency descriptive statistics to calculate the mean, standard deviation (SD), variance, minimum (Min), and maximum (Max) scores.

In the analysis section, the researcher will present the findings using specific abbreviations for clarity and ease of reference. The pre-test scores of the control group will

be denoted as PRTCONT, while the post-test scores for the same group will be referred to as POSTCONT. The pre-test scores of the experimental group will be labeled as PRETEXPRE, and their post-test scores will be indicated as POSTEXP. This systematic use of abbreviations will facilitate a more streamlined discussion of the results. That is,

PRTCONT → pre-test control group,

POSTCONT → post-test control group,

PRETEXPRE → pre-test experiment group

POSTEXP → post-test experiment group

#### 4.2.1 The Analysis of the Participants' Scores

The researcher prepared a pre-test which contained three different activities similar to the post-test activities addressed to the participants of both the control and experiment groups. The first activity was about multiple choices, the second one was about matching terms with their definitions, and the third one was about gap-filling. Each activity was out of ten points. So, each participant received a total scores achieved in the pre-test and post-test, which was out of 30.

**Table 4.3**  
**Descriptive Statistics**

Experimental group			Control group		
ID	pretest	posttest	ID	pretest	posttest
1	2,00	30,00	1	16,00	13,00
2	8,00	30,00	2	20,00	14,00
3	5,00	18,00	3	6,00	14,00
4	5,00	20,00	4	9,00	7,00
5	1,00	19,00	5	13,00	21,00
6	9,00	30,00	6	15,00	11,00

7	6,00	30,00		7	17,00	24,00
8	16,00	30,00		8	4,00	8,00
9	9,00	22,00		9	17,00	15,00
10	14,00	30,00		10	7,00	15,00
11	6,00	28,00		11	14,00	15,00
12	4,00	24,00		12	2,00	16,00
13	7,00	28,00		13	20,00	26,00
14	19,00	30,00		14	16,00	14,00
15	22,00	26,00		15	8,00	15,00
<b>Total</b>	<b>133,00</b>	<b>395,00</b>		<b>Total</b>	<b>184,00</b>	<b>228,00</b>
<b>Mean</b>	<b>8,87</b>	<b>26,33</b>		<b>Mean</b>	<b>12,27</b>	<b>15,20</b>
<b>SD</b>	<b>6,186006</b>	<b>4,530321</b>		<b>SD</b>	<b>5,812138</b>	<b>5,17135</b>
<b>Variance</b>	<b>38,26667</b>	<b>20,52381</b>		<b>Variance</b>	<b>33,78095</b>	<b>26,74286</b>
<b>Min</b>	<b>1,00</b>	<b>18,00</b>		<b>Min</b>	<b>2,00</b>	<b>7,00</b>
<b>Max</b>	<b>22,00</b>	<b>30,00</b>		<b>Max</b>	<b>20,00</b>	<b>26,00</b>

Table 4.3 represents the pre-test and post-test scores of the participants of the control group and experimental group. The table shows that the participants' names are replaced with numbers, and there are 15 in each group. The pre-test and post-test scores are out of 30. The experimental group had a lower mean pretest score (8.87) compared to the control group (12.27). However, the experimental group had a higher mean post-test score (26.33) compared to the control group (15.20). When comparing the experimental group to the control group, the experimental group shows a higher increase in mean scores from pretest to posttest compared to the control group (17.46 vs. 2.93). Concerning the Standard Deviation (SD), table 4.3 shows that the experiment group had an SD (SD  $\approx$  6.19) and the control group had an SD (SD = 5.81). The experimental group had a higher SD than the control group (6.19 vs. 5.81). The experimental group's SD was greater (6.19 vs. 5.81). A greater standard deviation indicated that there was greater variation in the experimental group's participants' scores as opposed to the control group's. In a similar vein, when comparing the variance, table 4.3 shows there is a greater variance in

the experimental group compared to the control group (38.27 vs. 33.78). This indicates that the experimental group's results varied more widely. Finally, table 4.3 indicated that the Min and Max scores of both groups were comparable, i.e., similar minimum scores. However, the experimental group achieved a higher maximum post-test score compared to the control group (30 vs. 26).

According to the results shown in Table 4.3, the participants in the experimental group improved their scores more than the participants in the control group, who did not receive this treatment. This indicates that the treatment applied in the present study to the experimental group had a significant impact on improving learners' scores in the activities related to COVID-19, medicine, and health care compared to the control group.

### **4.3 Statistical Analyses and Data Exploration**

The case processing summary and descriptive tables display various statistical analyses and data exploration on the pre-test control group, pre-test experimental group, post-test control group, and post-test experimental group.

#### **4.3.1 Processing Summary**

We create four types of plots: boxplots, histograms, and normal probability plots (NPLOT). These plots are often used for data visualization and initial data exploration.

#### **4.3.2 Case Processing Summary**

The case processing summary table in SPSS provides an overview about the dataset. It is used to understand the distribution of valid and missing data for each variable. The case processing summary table helps to assess data completeness and identify

the extent of missing data for each variable in our dataset.

**Table 4.4**  
**Case Processing Summary**

<b>Case Processing Summary</b>						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	Percent	N
PRTCONT	15	50,0%	15	50,0%	30	100,0%
PRETEXPRE	15	50,0%	15	50,0%	30	100,0%
POSTCONT	15	50,0%	15	50,0%	30	100,0%
POSTEXP	15	50,0%	15	50,0%	30	100,0%

Table 4.4 shows that all participants were present in the pre-test, during the treatment, and the post-test for both samples; control and experiment groups. These results indicate there is an equal number between the two groups which leads to valid the obtained results. That is, any increase or decrease goes back to the suggested treatment not to the difference in sample number. It appears that there are no cases with complete data (i.e., all variables have valid values) since both the valid and missing percentages are 50 % for each variable.

### 4.3.3 Descriptives

The tables 4.4 and 4.8 are put to create boxplots for the variables specified in the analysis. A boxplot is a graphical representation that illustrates the distribution of a dataset, making it useful for visualizing the spread and central tendency of the data. Histograms provide a visual representation of the frequency distribution of data. They also show how data points are distributed across different ranges or bins. They are helpful for understanding the shape and spread of data.

**Table 4.5**  
**Compare Groups Statistics Descriptives**

		Descriptives		
		Statistic	Std. Error	
PRTCONT	Mean	12,2667	1,50069	
	95% Confidence Interval for Mean	Lower Bound	9,0480	
		Upper Bound	15,4853	
	5% Trimmed Mean	12,4074		
	Median	14,0000		
	Variance	33,781		
	Std. Deviation	5,81214		
	Minimum	2,00		
	Maximum	20,00		
	Range	18,00		
	Interquartile Range	10,00		
	Skewness	-,371	,580	
	Kurtosis	-1,155	1,121	
	PRETEXPRE	Mean	8,8667	1,59722
95% Confidence Interval for Mean		Lower Bound	5,4410	
		Upper Bound	12,2924	
5% Trimmed Mean		8,5741		
Median		7,0000		
Variance		38,267		
Std. Deviation		6,18601		
Minimum		1,00		
Maximum		22,00		
Range		21,00		
Interquartile Range		9,00		
Skewness		,943	,580	
Kurtosis		,042	1,121	
POSTCONT		Mean	15,2000	1,33524
	95% Confidence Interval for Mean	Lower Bound	12,3362	
		Upper Bound	18,0638	
	5% Trimmed Mean	15,0556		
	Median	15,0000		
	Variance	26,743		
	Std. Deviation	5,17135		

	Minimum		7,00	
	Maximum		26,00	
	Range		19,00	
	Interquartile Range		3,00	
	Skewness		,669	,580
	Kurtosis		,577	1,121
	Mean		17,4667	1,55798
	95% Confidence	Lower Bound	14,1251	
	Interval for Mean	Upper Bound	20,8082	
	5% Trimmed Mean		17,6296	
	Median		18,0000	
	Variance		36,410	
POSTEXP	Std. Deviation		6,03403	
	Minimum		4,00	
	Maximum		28,00	
	Range		24,00	
	Interquartile Range		9,00	
	Skewness		-,455	,580
	Kurtosis		,454	1,121

Table 4.5 compares group statistics descriptives. These statistics offer important insights into the distribution, central tendency, variability, and shape of each variable's data. We use these statistics to understand the characteristics of our data and make informed decisions about data analysis techniques and hypothesis testing. That is, it facilitates the normality test of the samples since both samples; experiment and control groups are less than thirty ( $< 30$ ).

#### 4.4 Normality Test

To assess the normality of data with two independent variables, we typically use normality tests separately for each variable. The Common normality tests which we use in the present study include the following: Shapiro-Wilk Test, Kolmogorov-Smirnov Test, Histograms, and Q-Q Plots. It is important to note that each normality test is performed

separately for each independent variable. The results of these tests and visualizations can help us determine whether the data for each variable follows a normal distribution or if there are departures from normality. If our data departs significantly from normality in the first test of the Shapiro-Wilk Test and Kolmogorov-Smirnov Test, we use the second tests of Histograms and Q-Q Plots. If they provide the same results, i.e., non-normal distribution, we need to consider non-parametric tests or transformations to address this issue. To simplify matters, if a complication arises, i.e., the results of the two tests are inconsistent, one test indicates a significant result while the other does not. In this case, it is advisable to utilize the histogram, Q-Q plot, or Detrended Q-Q plot, as these tools offer a visual representation of the distribution of the obtained data.

**Table 4.6**  
**Tests of Normality**

Tests of Normality						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig	Statistic	df	Sig
PRTCONT	,151	15	,200*	,930	15	,271
PRETEXPRE	,225	15	,040	,904	15	,111
POSTCONT	,249	15	,013	,904	15	,110
POSTEXP	,129	15	,200*	,971	15	,868

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction.

Table 4.6 contains results from tests of normality conducted on four different variables (PRTCONT, PRETEXPRE, POSTCONT, and POSTEXP) using two different normality tests: Kolmogorov-Smirnov and Shapiro-Wilk tests. The results are presented with statistics, degrees of freedom (df), and p-values (Sig.).

For the PRTCONT variable: Kolmogorov-Smirnov: The p-value is 0.200. The

p-value is greater than the typical significance level of 0.05. This suggests that, based on the Kolmogorov-Smirnov test, there is no strong evidence to suggest that the data in the PRTCONT variable significantly departs from a normal distribution. Shapiro-Wilk: The p-value is 0.930. Once more, the p-value exceeds 0.05. The Shapiro-Wilk test also does not provide significant evidence of departure from normality.

For the PRETEXPRE, as presented in table 4.6 in the Kolmogorov-Smirnov test indicates that the p-value is 0.040. The p-value is less than 0.05, indicating that the data in the PRETEXPRE variable departs significantly from a normal distribution according to the Kolmogorov-Smirnov test. However, the Shapiro-Wilk test indicates that the p-value is 0.904. The p-value is greater than 0.05, suggesting that the Shapiro-Wilk test does not provide strong evidence of non-normality for this variable.

For the POSTCONT, table 4.6 shows that the Kolmogorov-Smirnov test, the p-value is 0.013. The p-value is below than 0.05, indicating a significant departure from normality based on the Kolmogorov-Smirnov test. In the Shapiro-Wilk test, the p-value is 0.110. The p-value is exceeds than 0.05, so the Shapiro-Wilk test does not strongly suggest non-normality for this variable.

For the POSTEXP, as shown in Table 4.6 the Kolmogorov-Smirnov test indicates that the p-value is 0.200. Like PRTCONT, the p-value exceeds 0.05, suggesting that there is no strong evidence of non-normality based on the Kolmogorov-Smirnov test. In addition, the Shapiro-Wilk test indicates that the p-value is 0.868, also suggesting no strong evidence of non-normality.

We can summarize the previous interpretations focusing on the p-values in the following points:

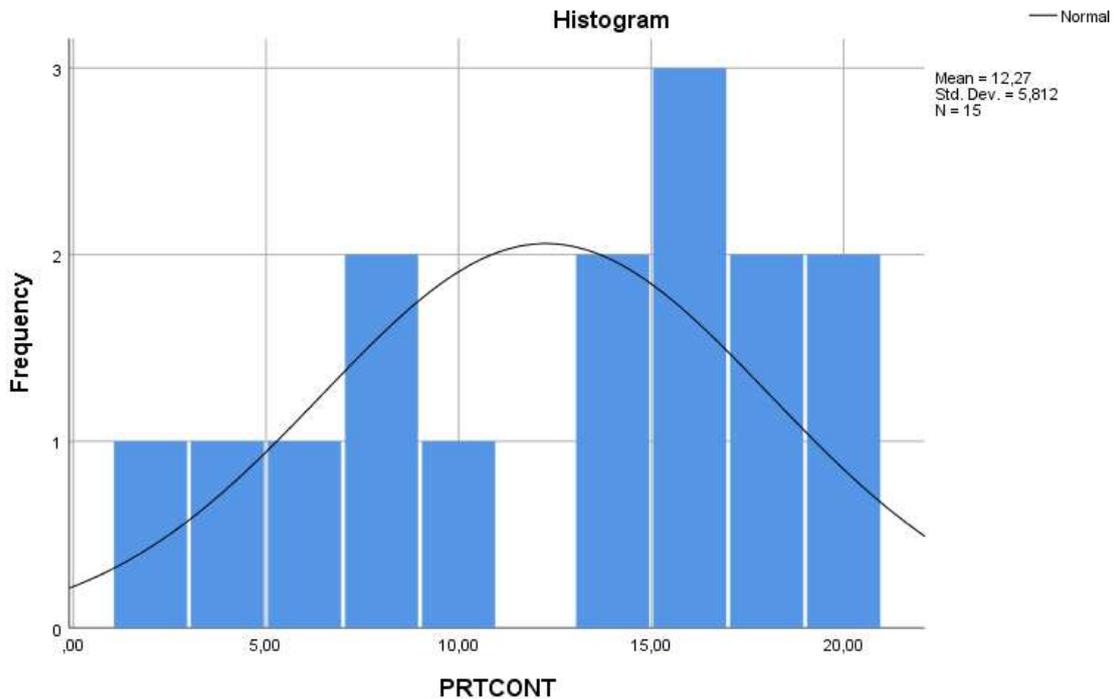
- For PRTCONT and POSTEXP, the Kolmogorov-Smirnov and Shapiro-Wilk tests indicate no strong evidence of departure from normality.
- For PRETEXPRE, the Kolmogorov-Smirnov test suggests a significant departure from normality, but the Shapiro-Wilk test does not provide strong evidence of non-normality.
- For POSTCONT, the Kolmogorov-Smirnov test suggests a significant departure from normality, while the Shapiro-Wilk test does not strongly indicate non-normality.

Hence, we need to use the histogram or the Q-Q plot, which visually illustrates the distribution of the collected data. Instead of choosing one tool, we prefer to use both to make sure that the obtained results follow a normal distribution or not.

Another normality test is called “a detrended Q-Q plot chart” which is a graphical tool that is used to assess the normality of a dataset by examining the distribution of data points against the quantiles of a normal distribution. In the present study, we did not use it because our data was normally distributed when using the histograms or the Q-Q plot charts.

The following histograms and charts represent the results of the normality test shown in table 4.6 Let’s interpret each in isolation.

#### 4.4.1 Pre-test Control Group

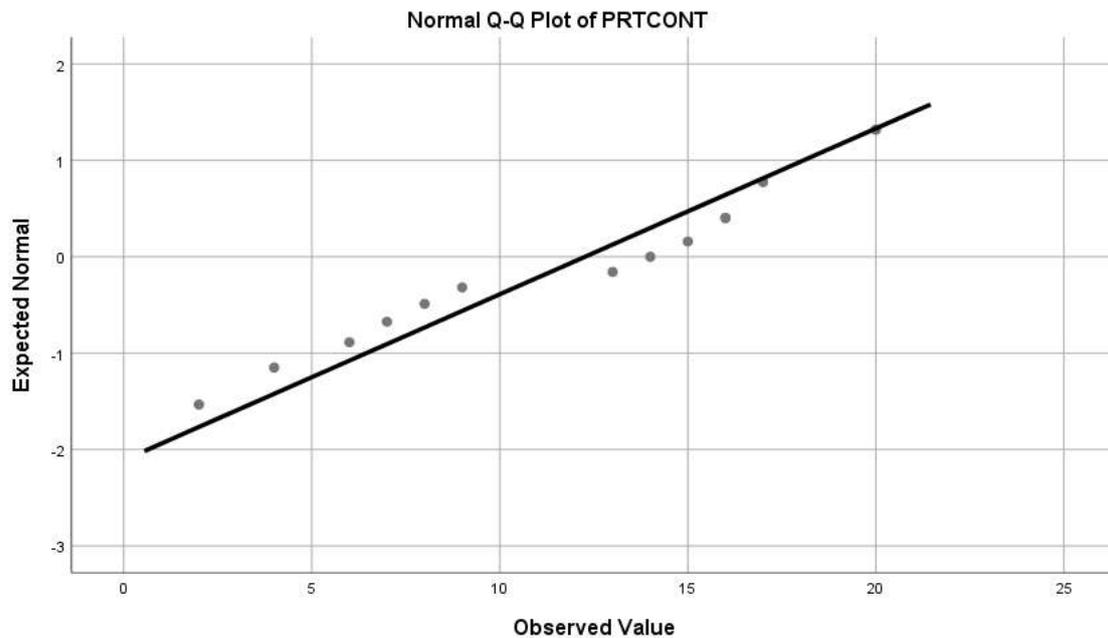


**Histogram 4.1**  
*Pre-Test Control Group*

For the PRTCONT results presented in Table 4.6 and Histogram 4.1, both the Kolmogorov-Smirnov and Shapiro-Wilk tests were conducted to check for normality. In both tests, the p-values exceed the typical significance level of 0.05 (alpha = 0.05). This suggests that there is no significant evidence to reject the null hypothesis that the data **follows a normal distribution**. The data for "PRTCONT" can be considered approximately normally distributed.

Histogram 4.1 for the pre-test control group shows that the data is evenly distributed around the mean, forming a bell-shaped curve. This indicates that the data follows a normal distribution. So, the histogram shows a symmetrical (normal) distribution.

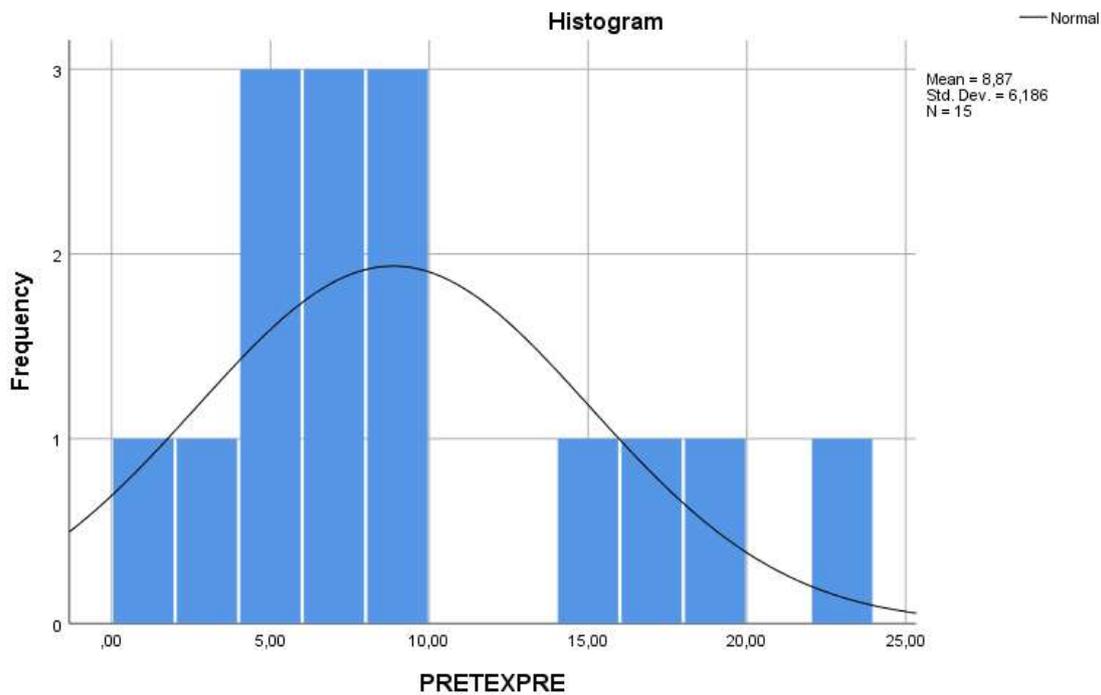
To provide more evidence that our data is normally distributed, we use the Q-Q plot chart.



**Graph 4.2**  
**Q-Q Plot Chart**  
*Pre-Test of Control Group*

The Q-Q (Quantile-Quantile) plot chart 4.2 for the pre-test control group provides a visual representation of the distribution of the data. As the Q-Q plot chart 4.2 shows the data points closely follow a straight line that is parallel to the diagonal line. This suggests that the data is approximately normally distributed. That is, our data does cluster around the trend line. This means when the dots broadly follow the trend line, it is a normal distribution. So, the Q-Q Plot chart 4.2 offers additional support for the normality of our distribution.

#### 4.4.2 Pre-Test Experimental Group

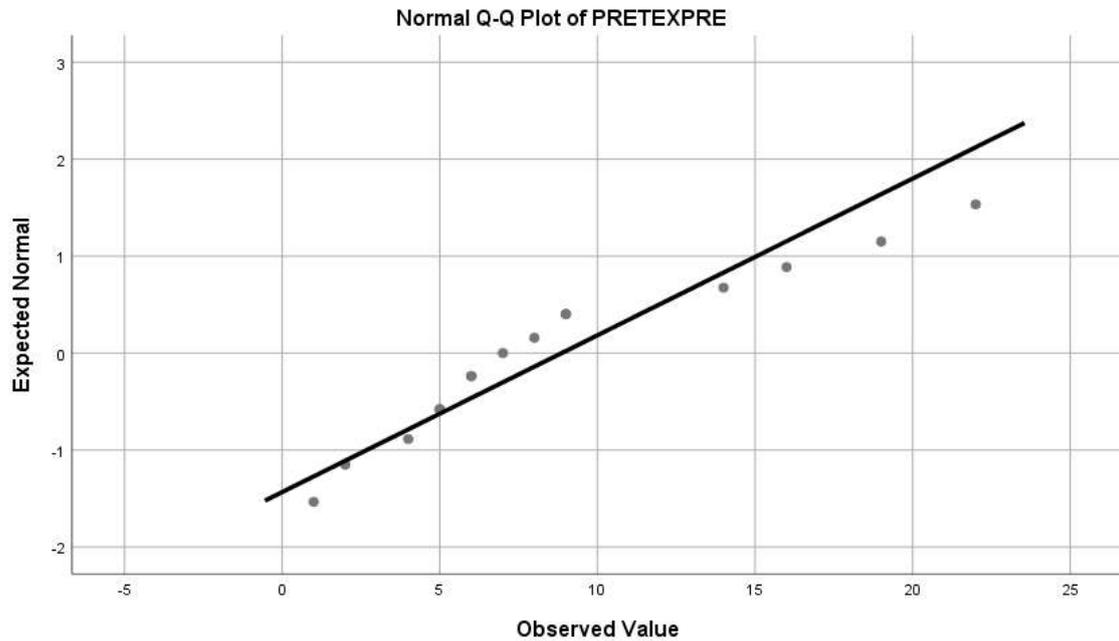


**Histogram 4.3**  
*Pre-Test Experimental Group*

For the pre-test experiment group (PRETEXPRE), the Kolmogorov-Smirnov test yields a p-value is below 0.05 (0.040), indicating some evidence of departure from normality. However, the Shapiro-Wilk test does not support this evidence as strongly (p-value of 0.111). Depending on these different results, we cannot consider whether our data is approximately normally distributed.

Histogram 4.3 displays a bell-shaped curve which indicates that the data is evenly distributed around the mean and follows a normal distribution. A symmetrical histogram is a sign of normality. However, a complication may arise when the results of the two tests are inconsistent, specifically when one test indicates a significant result while the other does not. In such cases, we turn to the Q-Q Plot and, if necessary, the Detrended Q-Q Plot to conduct a final assessment of normality. These plots offer a visual representation

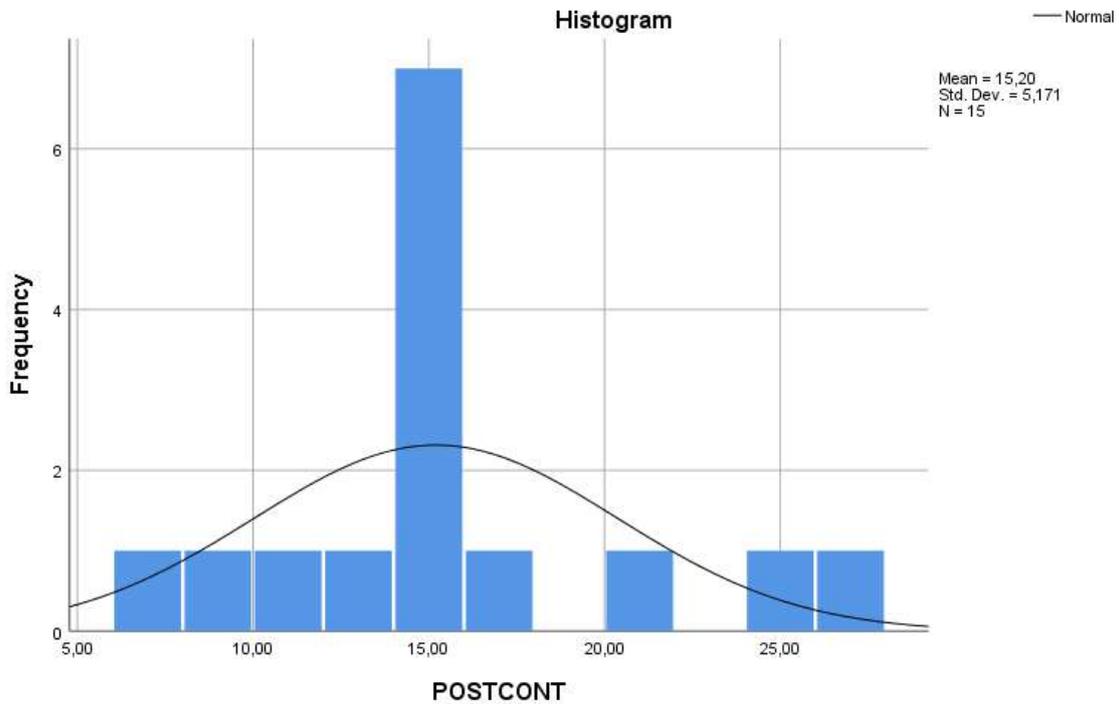
of the data distribution, as illustrated in graph 4.4.



**Graph 4.4**  
**Q-Q Plot Chart**  
*Pre-Test Experiment Group*

As Q-Q plot chart 4.4 for the pre-test experiment group above demonstrates that our data clusters around the trend line, offering further evidence of normality. The points generally align with the trend line, indicating that the distribution is normal. Because our data is normally distributed, there is no need to use a detrended Q-Q plot to reduce the impact of trends, in contrast to a conventional Q-Q (Quantile-Quantile) chart which can be influenced by the existence of outliers and trends in the data.

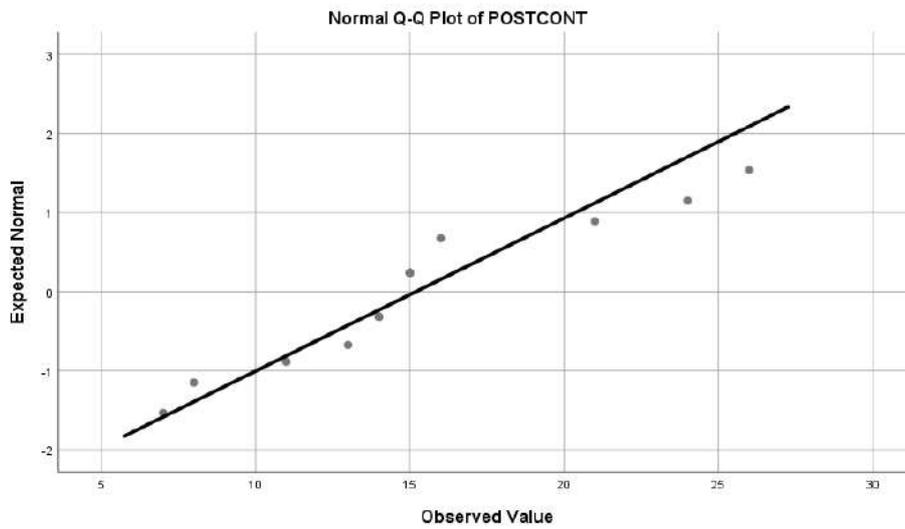
### 4.4.3 Post-Test of the Control Group



**Histogram 4.5**  
*Post Test Control Group*

For the post-test control group (POSTCONT) both the Kolmogorov-Smirnov and Shapiro-Wilk tests indicate that the data departs from normality (p-values are less than 0.05). This suggests that “POSTCONT” may not follow a normal distribution.

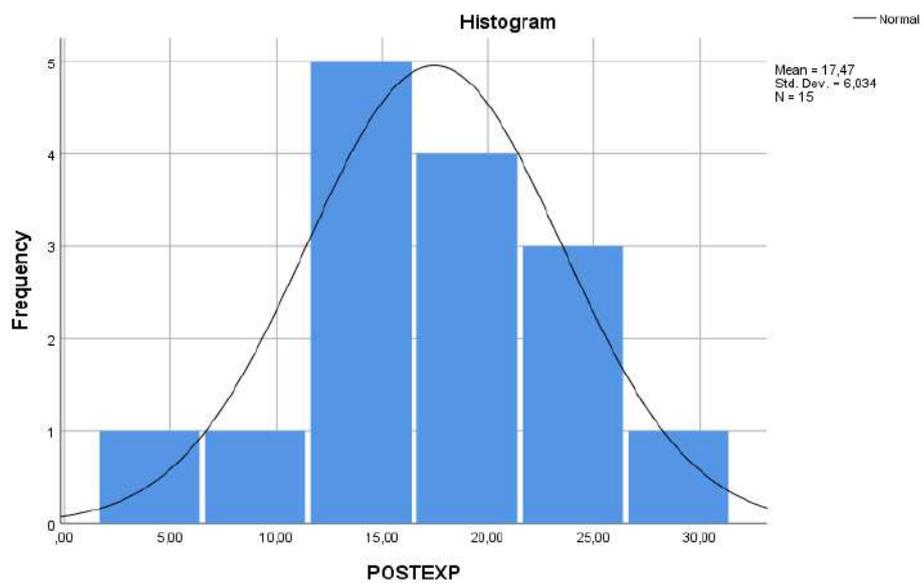
Histogram 4.5 of the post-test for the control group is considered a symmetrical histogram. It displays a bell-shaped curve, which indicates that the data is evenly distributed around the mean and follows a normal distribution. This is a sign of normality. In this case, it is important to use multiple methods to assess normality and not rely solely on one visualization or test. In addition to the Kolmogorov-Smirnov and Shapiro-Wilk tests of normality, there are other tests like the Q-Q plot and detrended Q-Q plot which can be used in conjunction with to provide insights into the normality test of our data. These tests can provide visualizations to make a comprehensive assessment of normality.



**Graph 4.6**  
**Q-Q Plot Chart**  
*Post-Test Control Group*

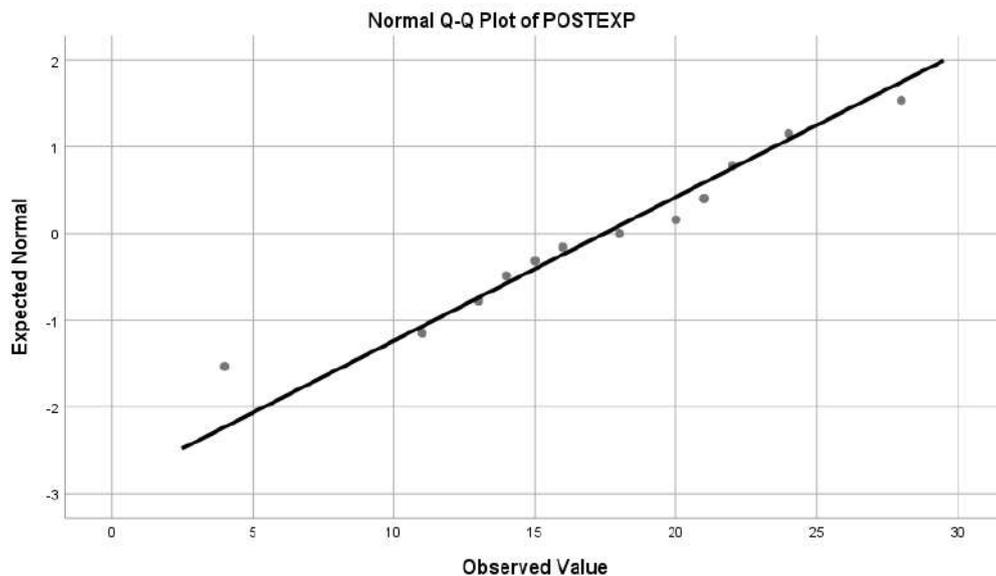
As the Q-Q plot chart 4.6 of the POSTCONT above shows our data clusters around the trend line, indicating that the distribution is likely normal. The points generally align with the trend line, further supporting the normality of the distribution.

**4.4.4 Post-Test Experimental Group**



**Histogram 4.7**  
*Post-Test Experiment Group*

For the POSTEXP, experiment group (POSTEXP), the results from both normality tests (Kolmogorov-Smirnov and Shapiro-Wilk) suggest that the data is normally distributed, since both p-values exceed 0.05. As histogram 4.7 of the post-test for the experiment shows, it is a symmetrical histogram which displays a bell-shaped curve which indicates that the data is evenly distributed around the mean and follows a normal distribution. This is a sign of normality.



**Graph 4.8**  
**Q-Q Plot Chart**  
*Post-Test Experiment Group*

As the Q-Q plot Chart 4.8 of the post-test control group above shows our data does cluster around the trend line. This provides evidence that our distribution is normal. The dots are broadly following the trend line, hence the distribution is normal.

To sum up normality tests, we shed light on the following basic points:

- Results of the PRTCONT and POSTEXP are approximately normally distributed based on the p-values of both normality tests.
- Results of the PRETEXPRE have some evidence of departure from normality according to the Kolmogorov-Smirnov test but not as strongly supported by the Shapiro-

Wilk test. So, we depended largely on the Q-Q plot chart which proved that it has a normal distribution.

- Results of the POSTCONT depart from normality according to both normality tests.

Therefore, the Q-Q plot chart gives evidence that it has a normal distribution as well.

#### 4.5 Group Statistics

Performing an independent samples T-test in SPSS involves comparing the means of two groups: the experimental group and the control group. Note the mean for each of the two groups in the “Group Statistics” section shows that the output indicates the average.

Table 4.7 presents a parallel comparison of the statistics for the two groups. It compares the pre-test scores of both the control and experimental groups with their respective post-test scores. The same procedure is applied to the gain scores of both groups. The key metrics displayed include the Mean, Standard Deviation, and Standard Error.

**Table 4.7**  
**Group Statistics**

		Group Statistics			
	Group	N	Mean	Std. Deviation	Std. Error Mean
Pretest	Control	15	12,2667	5,81214	1,50069
	Experimental	15	8,8667	6,18601	1,59722
Posttest	Control	15	15,2000	5,17135	1,33524
	Experimental	15	26,3333	4,53032	1,16972
GAIN SCORE	Control	15	2,9333	5,87326	1,51647
	Experimental	15	17,4667	6,03403	1,55798

As indicated in the table 4.7 participants of the experimental group show an important shift from a mean (M) of (M = 8,8667) with Standard Deviation (SD = 6,18601)

in the pre-test total scores to a mean of ( $M = 26,3333$ ) with ( $SD = 4,53032$ ) in the posttest total scores. The overall procedure for conducting a gain score analysis involves two main steps: (1) calculating the gain score, and (2) analyzing these gain scores using an analysis of variance, treating the treatment as the between-subjects factor. The SPSS syntax for calculating the gain score is: “COMPUTE gain = post-test – pre-test”. When we compute a gain score in this manner, we will find that the mean of the control group ( $M = 15.2000 - 12.2667 = 2.9333$ ) and the mean of the experimental group is ( $M = 26.3333 - 8.8667 = 17.4667$ ). As the Table 4.7 shows that the participants of the experimental group show a huge shift and a remarkable development in the gain scores ( $M = 17.4667$ ) with ( $SD = 6,03403$ ) in comparison to the gain scores of the control group of a mean ( $M = 2,9333$ ) with ( $SD = 5,87326$ ). The obtained mean with the experimental group in the gain scores of a mean ( $M = 17.4667$ ) with ( $SD = 6, 03403$ ) shows the effectiveness of introducing medical discourse vocabulary to first-year EFL learners.

#### **4.6 Independent Samples Test for Equality of Variances**

The independent-sample t-test is employed to evaluate the null hypothesis that there is no mean difference between the two groups in the population, based on the data collected from our samples. Specifically, it tests the null hypothesis that ( $H_0$ ) if EFL oral expression students are exposed to medical discourse, they will not develop their lexical competence. Additionally, the independent-sample t-test is commonly used to assess whether the mean difference between the two groups in the population is zero. While the null hypothesis ( $H_0$ ) asserts that there is no mean difference between the two groups, the alternative hypothesis ( $H_1$ ) posits that if EFL oral expression students are exposed to medical discourse, they will develop their lexical competence.

In this study, results from the pre-test, post-test, and gain scores were compared between the control and experimental groups.

**Table 4.8**  
**Independent Samples Test**

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower		Upper
pretest	Equal variances assumed	.042	.840	1,551	28	.132	3,40000	2,19161	-1,08932	7,88932
	Equal variances not assumed			1,551	27,892	.132	3,40000	2,19161	-1,09010	7,89010
posttest	Equal variances assumed	.115	.737	-6,272	28	.000	-11,13333	1,77514	-14,76954	-7,49713
	Equal variances not assumed			-6,272	27,524	.000	-11,13333	1,77514	-14,77237	-7,49429
GAIN SCORE	Equal variances assumed	.078	.782	-6,685	28	.000	-14,53333	2,17416	-18,98690	-10,07976
	Equal variances not assumed			-6,685	27,980	.000	-14,53333	2,17416	-18,98705	-10,07962

The researcher in table 4.8 compares the scores of the control and experimental groups in terms of the pre-test, the post-test, and the gain scores. Table 4.8 summarizes the total scores of the two groups in the pretest, the posttest, and the gain scores of the given exercises. As indicated above, the first column indicates Levene’s test for equality

of variances that demonstrates the significance level of the pretest total scores ( $p=0,840$ ) while the significance level of the posttest total score is ( $p=0,737$ ) and in gain scores ( $p=0,782$ ) in terms of the equal variances assumed. Concerning the second column, the t-test for equality of means indicates a statistically significant difference between the groups with a p-value of ( $p=0,132$ ) in the pretest total scores with a mean difference of ( $m=3,40000$ ); 95% Confidence Interval of the Difference with a lower value of ( $=-1,08932$ ) an upper value of ( $=7,88932$ ) for Equal variances assumed. For the posttest total score, the difference between the experiment and the control groups proved to be highly statistically different. The t-test for equality of means shows a highly statistically significant difference between the groups with a p-value of ( $p=0,000$ ) with a mean difference of ( $m=-11,13333$ ); 95% Confidence Interval of the Difference a lower value of ( $=-14,76954$ ) an upper value of ( $=-7,49713$ ) for Equal variances assumed. For the gain scores, the t-test for equality of means shows a highly statistically significant difference between the groups with a p-value of ( $p=0,000$ ) with a mean difference of ( $m=-14,53333$ ); 95% Confidence Interval of the Difference a lower value of ( $=-18,98690$ ) an upper value of ( $=-10,07976$ ) for Equal variances assumed.

The p-value obtained from the independent-samples t-test indicates statistical significance, prompting us to reject the null hypothesis of no mean difference in the population and accept the alternative hypothesis that a mean difference does exist. The total post-test scores and gain scores reveal a highly significant difference between the control group and the experimental group. This finding demonstrates the positive impact of using medical discourse to improve EFL learners' lexical competence at MKUB.

#### 4.7 Paired T-test of the Experimental Group

The researcher employs paired t-sample procedures to compare the pre-test and post-test scores. All scores were analyzed in relation to the two stages: pre-test and post-test, as shown in Table 4.8, which presents the mean, standard deviation, and standard error mean. The correlations are clearly outlined in Table 4.9, while Table 4.10 displays the paired differences.

##### 4.7.1 Paired Samples Statistics of the Experimental Group

Table 4.9 presents the mean scores, standard deviation, and standard error mean. It shows the paired scores for the pre-test and post-test, comparing the pre-test results of both the control and experimental groups with their respective post-test scores.

T-TEST PAIRS=PRTCONT PRETEXPRE WITH POSTCONT POSTEXP (PAIRED)  
/CRITERIA=CI(.9500)

**Table 4.9**  
**Paired Samples Statistics**

		Paired Samples Statistics			
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRTCONT	12,2667	15	5,81214	1,50069
	POSTCONT	15,2000	15	5,17135	1,33524
Pair 2	PRETEXPRE	8,8667	15	6,18601	1,59722
	POSTEXP	17,4667	15	6,03403	1,55798

As illustrated in Table 4.9, the mean pre-test scores of first-year EFL learners are compared to the mean post-test scores of the same participants. The pre-test mean for the control group is  $(=12,2667)$ , with a standard deviation of  $(SD=5,81214)$ , while the post-test mean for the same group is  $(=15,2000)$  with a standard deviation  $(SD=5,17135)$ .

Table 4.9 shows that there is no mean difference and there is no estimated mean difference (Mean Difference) in the pre-test and post-test of the control group. For the experiment group, the pre-test mean of the experiment group is (=8,8667) with a standard deviation (SD= 6,18601) while the post-test of the same group (i.e. experiment group) mean is (=17,4667) with a standard deviation (SD=6,03403). Table 4.9 shows that there is a mean difference and estimated mean difference (Mean Difference) in the pre-test and post-test of the experiment group (i.e. pre-test M= 8, 8667 and post-test M= 17, 4667). This increase in mean scores can be attributed to the treatment that the participants received.

#### **4.7.2 Paired Samples Correlations of the Experimental Group**

Table 4.10 displays the paired sample correlations. The table displays the paired samples correlations of the pre-test and post-test of the control group and the pre-test and post-test of the experiment group. Paired sample correlations are used to assess the relationship between two variables; medical discourse and EFL learners' lexical competence of the same sample. That is, we calculate correlation coefficients (typically Pearson's correlation coefficient) to determine if there is a significant association between the two variables on the control group in the pre-test and post-test. Then, the same procedure is made on the experiment group in the pre-test and post-test. It is used to investigate the relationship or degree of association between two variables that are measured on the same individuals, first-year EFL learners, at two different time points; pre-test and post-test.

**Table 4.10**  
**Paired Sample Correlations**

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	PRTCONT & POSTCONT	15	,433	,107
Pair 2	PRTCONT & POSTCONT	15	-,725	,002

To interpret the results as shown in Table 4.10 of the paired sample correlations, we need to focus on the correlation coefficient (Correlation R) and the associated significance level (Sig. p-value). The obtained results of two pairs: “PRTCONT” and POSTCONT” and “PRETEXPRE and POSTEXP” can be interpreted in the following way:

For pair 1, PRTCONT and POSTCONT, the correlation coefficient ( $R = 0.433$ ) and the significant difference (Sig. p-value = 0.107) which a positive correlation between the two variables, as it is greater than zero ( $R = 0.433 > 0$ ). This value indicates a positive correlation. However, the p-value ( $p=0.107$ ) associated with this correlation ( $R = 0.433$ ) is greater than the common significance level of 0.05. In statistical terms, this means that the correlation observed between “PRTCONT” and “POSTCONT” is not statistically significant at the 0.05 level. Therefore, we fail to reject the null hypothesis, indicating that there is no strong evidence of a significant correlation between these two variables in the sample. While there is a positive correlation observed in the sample, which may occurred by chance.

For pair 2 PRETEXPRE and POSTEXP, the correlation coefficient (R) for the pre-test of the experiment group and the post-test of the same group is ( $R = - 0.725$ ). This value indicates a strong negative correlation between the two variables, as it is less than

zero ( $R = -0.725 < 0$ ) and relatively close to (-1). It indicates a negative correlation. In this case, the p-value associated with the correlation is ( $p = 0.002$ ), which is much less than 0.05 ( $0.002 < 0.05$ ). This low p-value indicates that the correlation observed between “PRETEXPRE” and “POSTEXP” is statistically significant at the 0.05 level. Therefore, there is a significant negative correlation between these two variables in the sample.

In summary, for pair 1 (“PRTCONT & POSTCONT”), there is a positive correlation observed in our sample, but it is not statistically significant. For pair 2 (“PRETEXPRE & POSTEXP”), there is a strong and statistically significant negative correlation.

### 4.7.3 Paired Samples Test

Table 4.11 presents the differences between the pre-test and post-test scores for both the control and experimental groups. These differences are expressed in terms of mean, standard deviation, standard error of the mean, t-value, degrees of freedom (df), and the significance level (p-value or Sig (2-tailed)).

**Table 4.11**  
**Paired Samples Test**

		Paired Samples Test					t	df	Sig. (2-tailed)
		Paired Differences			95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
<b>Pair 1</b>	PRTCONT - POSTCONT	-2,93333	5,87326	1,51647	-6,18584	,31917	-1,934	14	,074
<b>Pair 2</b>	PRETEXPRE - POSTEXP	-8,60000	11,35027	2,93063	-14,88557	-2,31443	-2,935	14	,011

The results presented in Table 4.11 are derived from a paired samples t-test, which is utilized to compare the means of two related groups. In this analysis, the two pairs of

variables are “PRTCONT-POSTCONT” and “PRETEXPRE-POSTEXP”. The interpretation for each pair is as follows:

For pair 1 (**PRTCONT - POSTCONT**), the mean of the paired differences between “PRTCONT” and “POSTCONT” is ( $= -2.93333$ ). This negative mean suggests that, on average, “PRTCONT” tends to be lower than “POSTCONT” in our sample.

The two-tailed significance (Sig.) is ( $p = 0.074$ ). This p-value indicates that the difference between “PRTCONT” and “POSTCONT” is not statistically significant at the conventional significance level of (0.05). Specifically, since the p-value exceeds 0.05 ( $p=0.074 > 0.05$ ), we fail to reject the null hypothesis. Consequently, there is insufficient evidence to support a significant difference between the two conditions.

For pair 2 (**PRETEXPRE - POSTEXP**), the mean of the paired differences between “PRETEXPRE” and “POSTEXP” is ( $= -8.60000$ ). This negative mean suggests that “PRETEXPRE” tends to be lower than “POSTEXP” in our sample.

The two-tailed significance (Sig.) is 0.011. This p-value is below the conventional significance level of 0.05, indicating that the difference between “PRETEXPRE” and “POSTEXP” is statistically significant. That is, since the p-value is less than 0.05, we can reject the null hypothesis. This provides strong evidence of a significant difference between the two conditions, with “POSTEXP” being significantly higher than “PRETEXPRE”.

In summary, for Pair 1 (PRTCONT - POSTCONT), the mean difference is not statistically significant ( $p > 0.05$ ), while for Pair 2 (PRETEXPRE - POSTEXP), the mean difference is statistically significant ( $p < 0.05$ ), indicating a notable difference between the two conditions.

## 4.8 Testing the Hypothesis (Inferential Statistics)

After assessing normality via the Shapiro-Walk test results confirmed that the data were drawn from a normally distributed population. Next, Levene's test was conducted to verify the equality of variances across the groups, which is essential for the validity of the statistical analyses. To test the hypothesis, various calculations and analyses were performed. Pre-test and post-test scores were collected, followed by a series of statistical measures, including independent sample t-tests conducted using SPSS Statistics.

## 4.9 T-Test

### 4.9.1 T-Test Scores of the Experimental Group

In the present study, the experimental group is exposed to the treatment of watching videos related to medical discourse and reading texts related to COVID-19 in order to enhance first-year EFL learners' lexical competence during the pandemic. It undertakes three stages of procedures; at the first stage, they are exposed to a pre-test through which they exhibit their competencies and mastery of medical terms through different types of exercises. These later ones are classified in the following way: 1) multiple choices, 2) matching a word with its definition, and 3) gap filling. In the second stage, the experiment is conducted by watching four videos related to COVID-19 entitled as follows:

1. *"Recognizing Day-to-Day Signs and Symptoms of Coronavirus"*.
2. *"How Covid-19 Affects the Lungs"*.
3. *"The Story of Corona Virus"*.
4. *"Flu, Pneumonia and Covid-19,"* where a diversity of medical terms are presented

appropriately.

It is also conducted by reading a text related to COVID-19, “COVID-19: A Challenging Pandemic”. In the third stage, first-year EFL learners are exposed to a post-test that takes place after the treatment. The participants are to demonstrate the effects of introducing medical terms on their lexical competence when communicating about different topics and their success in social interaction as well.

#### **4.9.1.1 Pre-Test Scores of the Experimental Group**

Participants (n=15) in this study took part in the pre-test stage as part of the research conducted at the Department of English at MKUB. This diagnostic test aims to identify key weaknesses in their vocabulary knowledge related to the COVID-19 pandemic and medical terminology, highlighting their challenges in communicating on various topics and engaging in social interactions about the pandemic and vaccination, particularly during and after the COVID-19 era. The pretest was administered in November 2021 with the same group of 15 participants. The results were analyzed descriptively using the SPSS program to calculate frequency, mean, and standard deviation. These analyses precede the paired t-test and independent samples t-test, which were employed to compare the scores of each group (pretest versus post-test) as well as the scores between the two groups. Additionally, gain scores were included to validate the results obtained.

#### **4.9.1.2 Post-Test Scores of Experimental Group**

After introducing medical discourse to first-year EFL learners in the oral expression module for the sake of enhancing their lexical competence, the participants are exposed to a post-test that occurs in February 2022. They are supposed to grasp different new vocabularies related to Coronavirus and succeed in their social interaction when com-

municating inside and outside the classroom. They are also supposed to be aware about the pandemic, and vaccination, especially during and post the COVID-19 era. The participants are asked to be able to perform orally of the pandemic with a strong personality and rich speech with appropriate lexis related to the pandemic and COVID-19. The researcher uses observation and a checklist in oral sessions during the participants' performances to facilitate observing their development and use of rich vocabulary related to medicine and Coronavirus.

#### 4.9.2 Gain Score

Here is the SPSS syntax for calculating the gain score:

**COMPUTE gain = posttest - pretest**

In this way, we may calculate a gain score; a positive gain score means that the post-test score was higher than the pre-test score, while a negative gain score means the opposite. The rationale for employing gain scores is that they account for variations in pretest results by comparing each person's posttest score to their pre-test score. However, the disparities in the groups' pre-test results cannot be accounted for by a gain score analysis.

Analyzing the gain scores using the treatment versus control between subjects factor allows us to test the null hypothesis that there is no difference in improvement in first-year learners' lexical competence between the two groups. In this case, we are treating first-year EFL learners to medical discourse. We reject the null hypothesis if the treatment's primary impact is statistically significant.

When interpreting the results from an independent-samples t-test, descriptive statis-

tics include the sample size, sample mean and sample standard deviation for each group of our independent variable, as well as the sample mean difference between these two groups.

Doing the experimental means having a null and alternative hypotheses, which are stated below:

**H<sub>0</sub>:** If EFL oral expression students are exposed to medical discourse, they will not develop their lexical competence.

**H<sub>1</sub>:** If EFL oral expression students are exposed to medical discourse, they will develop their lexical competence.

#### **4.10 Analysis of the Classroom Observation**

The present study depends on a classroom observation using a checklist after the treatment. The researcher provided the participants with helpful feedback and a clear understanding of what to look for in their presentations. This can be done through well-elaborated checklist to guide first-year EFL learners during the assessment process. The present study focused on introducing medical discourse to enhance first-year EFL learners' lexical competence during the COVID-19 pandemic and post-era. Hence, we try to elaborate and adopt a checklist which can be used as a tool for improving the research efficiency and ensuring the completeness and accuracy of the present study.

##### **4.10.1 Checklist**

Checklists can be simple or detailed, depending on the complexity of the research project and the specific needs of the researcher. In the present study, we focus on introducing medical discourse to enhance EFL learners' lexical competence during the

COVID-19 pandemic. Hence, we try to elaborate and adapt a checklist that can be used as a tool for improving the research efficiency and ensuring the completeness and accuracy of the present study.

*Note: ✓: observed / ✗: not observed*

**Table 4.12**  
**Classroom Observation Checklist**

Aspects (not) to be observed	✓	✗	Participants (n = 15)
<b>1. Poor communication about the pandemic</b>	03	12	15
<b>2. Confusing when required explaining or providing comment about the article or/and videos</b>	02	13	15
<b>3. Difficulty of using words appropriately in sentences related to COVID-19</b>	01	14	15
<b>4. Learners use vocabulary from the posted videos and articles on Moodle</b>	15	00	15
<b>5. Learners depend on the online debate which occurred among learners in the chat room on Moodle</b>	15	00	15
<b>6. Self-confidence when performing topic about the pandemic</b>	14	01	15

Table 4.12 indicates the results obtained from the observation made during the oral presentation of first-year EFL learners about the pandemic, COVID-19, and healthcare after the treatment and they are presented as follows:

**Item 1: Poor communication about the pandemic:** Table 4.12 shows that three

first-year EFL learners suffer from poor communication about the pandemic, however twelve participants do not suffer from the same problem (3 -12 out of 15). It indicates that first-year EFL learners reached a noticeable development in their communication with peers about the pandemic.

**Item 2: Confusing when required explaining or providing comment about the article or/and videos:** Table 4.12 presents that thirteen first year EFL learners out of fifteen do not suffer from confusion when they are required to explain or provide comments about the article or/and videos presented in the classroom during the face-to-face learning (13 / 15). The minority, only two students out of fifteen (2 / 15) who still make confusion when required explaining or providing comments about the article or/and videos presented in the classroom. The obtained results suggest that first year EFL learners have benefited from the treatment of the experiment study.

**Item 3: Difficulty of using words appropriately in sentences related to COVID-19:** Table 4.12 indicates only one learner who still had difficulty of using words appropriately in sentences related to COVID-19 (1 / 15). The majority of first year EFL learners were able to use medical terms in meaningful sentences related to COVID-19 (14 students out of 15). The result indicates that first-year EFL learners benefited from the treatment of the study and it was of great help in their oral performances.

**Item 4: Learners use vocabulary from the posted videos and articles on Moodle:** Table 4.12 shows that all first year EFL learners used vocabulary from the posted videos and articles on Moodle platform, the official platform of online learn-

ing during the pandemic (15 / 15). This result proved the effectiveness of the treatment and blended learning since learners depended largely to grasp as possible as new medical term from Moodle platform.

**Item 5: Learners depend on the online debate which occurred among learners in the chat room on Moodle:** Table 4.12 presents all first-year EFL learners (15 out of 15) were observed to depend on the online debate which occurred among learners in the chat room on Moodle platform. The researcher observed the participants' oral performances were built out from the debate made on the chat room. It indicates the effectiveness of the given activity which was discussing the posted articles and videos via the online platform Moodle.

**Item 6: Self confidence when performing topic about the pandemic:** The researcher observed most first-year EFL learners (14 out of 15) showed self-confidence during their oral performance. The result proved the effectiveness of introducing medical terms to first-year EFL learners bridged for oral performance with self-confidence about the pandemic, COVID -19, and health care topics.

There is a progress in learners' oral performances. There is a noticeable development in using medical terms. The debate made in the chat room available on Moodle platform help first-year EFL learners to erect and elaborate a meaningful and good communication and/ or debate about the pandemic. The classroom observation checklist shed light on many important and basic items of the present study, for instance, the use of medical vocabulary to explain, comment, and debate about topics related to COVID-19 and pandemic. First-year EFL learners used Moodle platform to enrich their vocabulary related to medicine during the blended leaning.

#### 4.10.2 Classroom Observation

The present study depends on classroom observation, another tool for collecting data that is usually seen as offering the researcher the opportunity to collect live data in the classroom.

The observation can be further analyzed through the classroom observation report (see Appendix G) to determine the significance of the observed items. It is based on three basic elements: first, the use of Information Communication Technologies (ICT) to facilitate the presentation of medical terms; Second, the interaction between first-year EFL learners about health care, COVID-19, and pandemic topics. Third, the use of the Moodle platform during online learning.

It was observed that the use of ICT in EFL classrooms helped first-year EFL learners grasp new vocabulary related to COVID-19, health care, and the pandemic. It had a positive impact on first-year EFL classes on their oral performances, as well as their self-confidence and engagement with topics related to medicine. The researcher integrated both ICT inside the classroom during the face-to-face learning and Moodle platform during the online learning. The blended learning which first-year EFL learners witnessed during the pandemic helped both teachers and learners to discuss, debate, and exchange information about COVID-19 and the health crisis via the chat room available on the Moodle platform. Incorporating ICT tools and the Moodle platform increased first-year EFL learners' engagement, self-confidence, and interest to grasp as possible as they can new medical terms.

It was observed that the interaction among first-year EFL learners on topics related to health care, COVID-19, and the pandemic was characterized by a developed

debate rich in lexis related to medicine. It was observed as well that first-year EFL learners were comfortable during the oral discussion and debate due to the various e-learning tools and platforms such as data-show, videos, articles, and Moodle which facilitated discussions, sharing resources, and engaged them interact in topics related to health care and the pandemic. Additionally, it paved the way for learners to be autonomous learners and have self-confidence during oral presentations. It helped first-year EFL learners visualize, understand, and discuss medical concepts and terminology more effectively. Engaging first-year EFL learners to discuss topics related to health care, COVID-19, and the pandemic promoted their critical thinking and communication skills which lead to essential and clear communication in the classroom and real-life situations.

It was observed from the participants' oral presentation that first-year EFL learners used a diversity of medical terms which were shared via the posted videos and articles whether on Moodle or in the classroom. Moodle platform allowed them to grasp as much as they could from online learning during the pandemic which lasted for three years (2019, 2020, and 2021). The available elements of the Moodle platform facilitated the teaching-learning process of the oral expression module during the blended learning. The platform facilitated exchanging information and debating about topics related to health care, COVID-19, and the pandemic via the optimal choices available on Moodle, for instance, announcements, forums, and messaging. The chat room encouraged first-year EFL learners to ask any question about the article or videos with no fear or anxiety. It developed their peer-to-peer communication and enhanced autonomous learning.

#### 4.11 Analysis of Students' Questionnaire

The researcher administered a post-experiment questionnaire addressed to the experiment group participants only. All the participants (n=15) in the experiment responded to the questionnaire (for more details about the questionnaire, see Appendix C). In order to gauge first-year EFL students' feelings on including medical terminology into their language lessons, a survey was sent out to them following the treatment. A statistical analysis was done on the questionnaire data using percentages, and the findings were subsequently interpreted.

- **Item one:** EFL Learners' Interests in Medical Discourse and health care before the Pandemic.

**Table 4.13**  
**Participants' attitudes towards Medical Discourse as an Introductory Phase in Oral Expression during the Pandemic**

Responses	Interested	Not Interested	Neutral
<b>Participants</b>	01	14	00
<b>Percentage</b>	6.66%	93.33%	0%

Out of the participants, fourteen '14' (93.33%) expressed a lack of interest in the fields of medicine and health care, as they were studying in the literary stream. In contrast, one '1' participant (6.66%) showed interest in these areas, having a background in science and a focus on medicine and pharmacy. Notably, no participants (0%) selected a "neutral" response.

- **Item two:** The Need to New Vocabularies Related to COVID-19 Pandemic.

**Table 4.14**  
**Participants' Needs to New Vocabulary Related to Medicine and Health Especially during and post the Pandemic**

Responses	Needed	Not Needed	Neutral
<b>Participants</b>	15	00	00
<b>Percentage</b>	100%	0%	0%

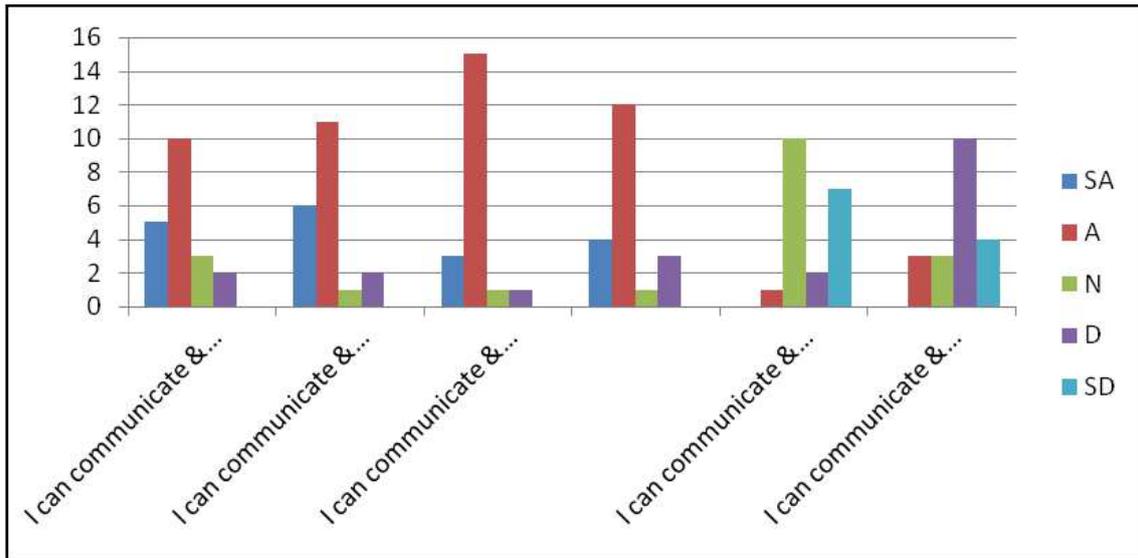
All fifteen '15' participants, representing 100%, acknowledged the necessity of acquiring new vocabulary related to medical issues and health care, particularly in light of the ongoing COVID-19 pandemic. None of the participants selected "not needed" or "neutral" as a response.

- **Item Three::** Participants' Ability to Produce Vocabulary about Medical Discourse and Health Care.

*SA: Strongly agree, A: Agree, N: Neutral, D: Disagree, SD: Strongly disagree, &: and*

**Table 4.15**  
**Participants' Ability in Tackling Science Topics; Medical Discourse and Health Care**

Statements	SA	A	N	D	SD
1. I can communicate & perform food topic	25 %	50 %	15 %	10 %	0 %
2. I can communicate & perform culture topic	30 %	55 %	5 %	10 %	0 %
3. I can communicate & perform travel topic	15 %	75 %	5 %	5 %	0%
4. I can communicate & perform T.V program	20 %	60 %	5 %	15 %	0 %
5. I can communicate & perform medical issues	0 %	5 %	50 %	10 %	35 %
6. I can communicate & perform crisis like the COVID-19pandemic topic	0 %	15 %	15 %	50 %	20 %



**Figure 4.9**  
*Participants' Ability to Produce Vocabulary in Medical Discourse and Health Care*

Table 4.15 and figure 4.9 illustrate the participants' ability to produce vocabulary, communicate, and engage with various topics in the classroom. Most participants agreed with the first four statements related to food, culture, travel, and TV programs, with 50%, 55%, 75%, and 60%, respectively, indicating their ability to produce vocabulary and communicate effectively in these areas. Notably, 0% of respondents strongly disagreed with these first four statements. In contrast, when addressing medical issues or crises such as the COVID-19 pandemic, 50% of participants expressed a neutral or disagreeing stance, while 35% and 20% indicated strong disagreement.

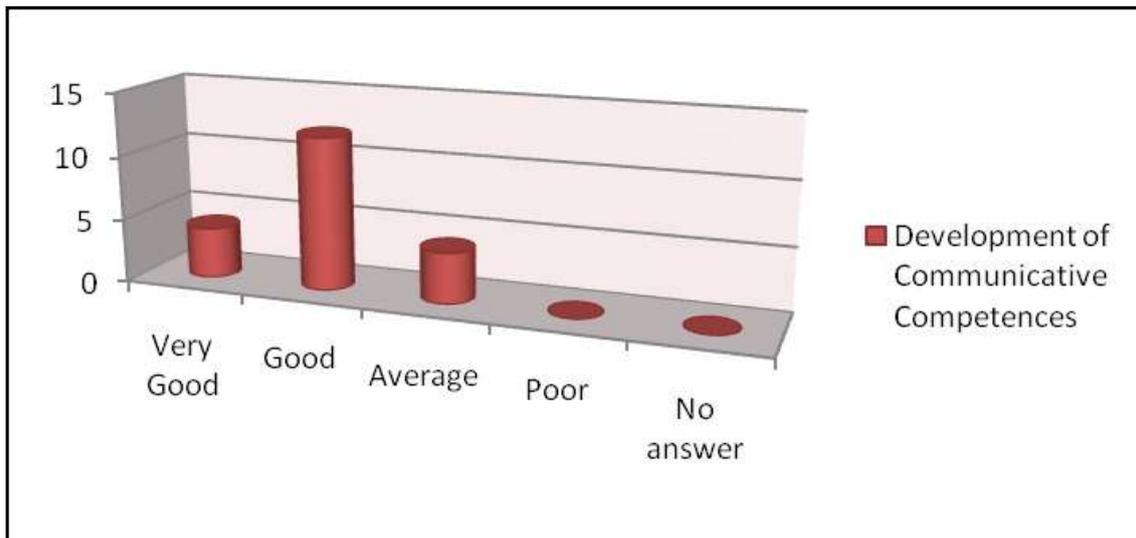
- **Item Four:** Participants' Feedback to Introducing Medical Discourse.

**Table 4.16**  
**Participants' Feedback to the New Phase in Enhancing their Lexical Competences**

Responses	Effective Phase	Not effective	Neutral
Participants	14	00	01
Percentage	93.33 %	0 %	6.66 %

The participants unanimously agree on the significance of incorporating medical discourse and health care as an effective means of improving their lexical competencies. Only one participant chose to remain neutral.

- **Item Five::** Participants' Self-Assessment of the Development of their Lexical Competence by the End of the Treatment.



**Figure 4.10**

*Participants' Self-Evaluation to their Lexical Competences (End of the Treatment)*

Figure 4.10 shows that the majority of participants (12 individuals) self-evaluated their lexical competencies as having developed to a “good” level (80%) after the treatment. The remaining three respondents indicated that their abilities to produce, communicate, and perform in medical issues and health care had reached either “good” or “very good” levels (20%). Notably, none of the participants reported their lexical competencies as “poor”.

The research findings indicate that EFL learners lacked familiarity with medical issues and their associated vocabulary. As a result, they struggled to produce relevant vocabulary and found it challenging to engage in discussions on these topics. This led to significant communication breakdowns when they were asked to develop and

perform conversations in EFL classes.

#### 4.12 The Descriptive Study of the Questionnaire Using SPSS

**Table 4.17**  
**The Descriptive Study of the Questionnaire Using SPSS**

	N	Mean	SD
I can communicate & perform food topic ( <i>Pre-test</i> )	15	4,0000	,84515
I can communicate & perform culture topic ( <i>Pre-test</i> )	15	4,2000	,77460
I can communicate & perform travel topic ( <i>Pre-test</i> )	15	4,0000	,75593
I can communicate & perform T.V program ( <i>Pre-test</i> )	15	3,8667	,91548
I can communicate & perform medical issues ( <i>Pre-test</i> )	15	2,4667	1,24595
I can communicate & perform crisis like the COVID-19pandemic topic ( <i>Pre-test</i> )	15	1,8667	,83381
I can communicate & perform food topic ( <i>Post test</i> )	15	4,0667	,88372
I can communicate & perform culture topic ( <i>Post test</i> )	15	4,4667	,51640
I can communicate & perform travel topic ( <i>Post test</i> )	15	4,0667	,79881
I can communicate & perform T.V program ( <i>Post test</i> )	15	4,1333	,83381
I can communicate & perform medical issues ( <i>Post test</i> )	15	4,3333	,61721
I can communicate & perform crisis like the COVID-19pandemic topic ( <i>Post test</i> )	15	4,4000	,63246
N valide (liste)	15		

Table 4.17 displays results obtained in the pre-test and post-test of first-year EFL learners after tackling different topics during oral performances, along with the mean and standard deviation (SD) for each topic in a group of 15 learners. Higher scores indicate a higher level of competence in communicating and carrying out tasks linked to a particular issue. The values range from 1 to 5. The standard deviation shows how scores are distributed around the mean, whereas the mean indicates the average score.

The following are the main findings from the table 4.17:

For the pre-test, the “culture” topic with a mean score (of 4. 2000) and the “T.V. program” topic with a mean score (of 3. 8667) representing the highest mean scores achieved by first-year EFL learners in oral performances. These results suggest a considerably higher baseline capacity for communication and task performance linked to these topics.

For the pre-test, the “Crisis like the COVID-19 pandemic” topic with a mean score (of 1. 8667) and “medical issues” with a mean score (of 2. 4667) have the lowest mean scores in oral performances. It indicates a lesser baseline skill in these areas.

However, the post-test results show an improvement in the capacity to communicate and carry out tasks linked to different topics, with mean scores usually rising across all areas. The mean scores reveal that first-year EFL learners improved their ability to communicate and perform a variety of topics. The topic “crisis like the COVID-19 pandemic” showed the biggest improvement, with the mean score rising from 1.8667 in the pre-test to 4.4000 in the post-test. This significant improvement is impressive and shows how well the educational intervention developed the learners’ skills in this specific area.

To summarize the obtained findings presented in table 4.17, the post-test results emphasize the significance of the treatment which was made to address specific language competencies, particularly in areas related to crisis communication and medical issues. The findings are consistent with the research on the impact of introducing medical discourse to first-year EFL learners to develop their lexical competence.

**4.13 Class Width**

Mathematically speaking, the class width is expressed in the following formula:

$$\text{Class Width} = \frac{\text{Upper Class Limit} - \text{Lower Class Limit}}{5}$$

To find the width, the researcher is required to follow these steps:

1. Calculate the range of the entire data set by subtracting the lowest point from the highest.
2. Divide it by the number of classes.
3. Round this number up (usually, to the nearest whole number).

Table 4.18 represents learners’ answers to the last question (question 7: To what extent do you agree/ disagree/ with the following statements (see appendix C)) in the given questionnaire in the form of a Likert scale or to tick “strongly agree (SA)”, “agree (A)”, “neuter (N)”, “disagree (D)”, and “strongly disagree (SD)”.

**Table 4.18**  
**Learners’ Perception towards Different Topics**

Statements (Pre-test)	SA	A	N	D	SD	Statements (Post test)	SA	A	N	D	SD
1. I can communicate & perform food topic	4	8	2	1	0	1. I can communicate & perform food topic	5	7	1	1	0
2. I can communicate & perform culture topic	5	9	0	1	0	2. I can communicate & perform culture topic	7	8	0	0	0
3. I can communicate & perform travel topic	3	10	1	1	0	3. I can communicate & perform travel topic	4	9	1	1	0
4. I can communicate & perform T.V program	3	9	1	2	0	4. I can communicate & perform T.V program	5	8	1	1	0
5. I can communicate & perform medical issues	1	1	7	1	5	5. I can communicate & perform medical issues	6	8	1	0	0
6. I can communicate &	0	1	1	8	5	6. I can communicate &	7	7	1	0	0

perform crisis like the COVID-19 pandemic topic	perform crisis like the COVID-19 pandemic topic
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Table 5.14 indicates first-year EFL learners' answers where they ticked for the appropriate answer. It contains the frequency for each statement in both the pre-test and post-test. The researcher calculated these replies using SPSS and ended-up with table 4.17. Let us provide comments and justifications for the provided results in table 4.18:

**Item 1: “I can communicate and perform food topic”:** In the pre-test, the majority of first-year EFL learners' responses fall into the “Agree” group which suggests a propensity for speaking and acting on the food topic. No learner strongly disagrees, and the distribution is fairly balanced across the categories. In comparison to the post-test, Responses from first-year EFL learners show a little improvement, leaning more toward the “Strongly Agree” and “Agree” categories. The “Neutral” and “Disagree” categories now have fewer members.

**Item 2: “I can communicate and perform culture topic”:** In the pre-test, the majority of first-year EFL learners indicated positive attitudes towards the “culture” topic, falling into the “Agree” group. There are no respondents in the “Neutral” group, indicating a definite inclination toward affirmative answers. Whereas, in the post-test, more learners ticked for “Strongly agree” and “Agree” which is considered as a favorable change. The fact that there is no “Disagree” option suggests that this area has improved.

**Item 3 “I can communicate and perform travel topic”:** In the pre-test, the majority of first-year EFL learners agree that they can perform and communicate effectively on the trip topic. Once again, the “Neutral” category has no response. In

comparison to the post-test, there has been an improvement, as more respondents are falling into the “Strongly Agree” and “Agree” categories. There is only one EFL learner who responded to the “Disagree” category.

**Item 4 “I can communicate and perform T.V program”:** In the pre-test, there are responses in all the categories, and most of them fall into the “Agree” group. Only a small number of first-year EFL learners disagree (2 learners) or disagree strongly (none). In comparison to the post-test results, there is an improvement, especially in the “Strongly Agree” category, and the number of first-year EFL learners in the “Neuter” and “Disagree” categories has decreased.

**Item 5 “I can communicate and perform medical issues”:** In the pre-test, first-year EFL learners are dispersed among all categories, resulting in a more variable distribution of responses. A significant number of them disagree or tick for the “neuter” option about their ability to perform and communicate in this area. However, the post-test results indicate the number of first-year EFL learners who indicate that they “Strongly Agree” or “Agree” has significantly increased. There is a noticeable (discernible) decline in the “Disagree” and “Strongly Disagree” categories.

**Item 6 “I can communicate and perform crisis like the COVID-19 pandemic topic”:** in the pre-test, most first-year EFL learners tick for “Neuter” or “Disagree” with their abilities to tackle this difficult topic. Strong disagreements from certain learners suggest a possible area for development or focused assistance. In comparison to the post-test results, first-year EFL learners show significant progress in tackling this topic; most are now in the “Strongly Agree” and “Agree” options.

There are fewer respondents in the “Disagree” and “Strongly Disagree” options.

As indicated, the post-test results show first-year EFL learners’ perception of their communication and performance skills has improved across various topics. The results demonstrate the topics of medical issues and crises show the most improvements, indicating that the instructional intervention or learning process has been successful in these difficult areas. The analysis shows the importance of the treatment of the present study which is the positive effect of introducing medical terms to first-year EFL learners to develop their lexical competence.

#### **4.14 Discussion**

The questionnaire revealed that first-year EFL learners recognize the significance of incorporating medical discourse as a new form of oral expression to enhance their lexical competence, particularly in light of the recent COVID-19 pandemic, which impacted everyone’s lives and communication methods. This approach aims to enrich their vocabulary, enabling them to learn, discover, and easily produce new terms related to medical issues and health care. The tables and figures presented above demonstrate that the introduction of medical terminology in EFL classes is both valid and reliable.

By integrating medical discourse, first-year EFL learners have been able to acquire new vocabulary related to medical topics, categorize these terms into nouns, verbs, and adjectives, and engage in conversations about these subjects. They have also participated in role-playing activities based on these discussions. Feedback from participants indicated that a significant majority supported the introduction of medical terms to EFL learners, as it enhanced their lexical competencies. The findings suggest that first-year EFL learners successfully learned various new vocabulary related to medical issues and health care,

which improved their lexical competence and facilitated effective communication both inside and outside of EFL classes.

Furthermore, after engaging with videos and texts related to COVID-19, medical discourse, and health care, participants demonstrated an enhancement in their lexical competence, as evidenced by their oral performances in class.

The results of this study indicate that the unexpected COVID-19 pandemic has ushered in a new era of knowledge, introducing EFL learners to new terms, facts, and concepts related to diseases that they had not encountered before. New terminology associated with the virus, such as “pandemic”, “epidemic”, “containment”, and “lockdown”, along with their synonyms and antonyms, were introduced throughout this study. Consequently, vocabulary knowledge is crucial for the language competency of EFL learners.

However, the research findings also reveal that many first-year EFL students remain unaware of the importance of medical terminology, as reflected in their discussions and debates on the topic with their peers. Therefore, it is essential to incorporate medical discourse into EFL classes to enrich their vocabulary and develop their lexical competencies during the COVID-19 pandemic and beyond.

Introducing medical discourse to EFL learners to develop their lexical competence requires focusing on the linguistics of medical discourse, teaching specialized medical vocabulary, using practical projects to promote English use in the medical setting, using authentic materials, vocabulary building, incorporating technology and online platforms (Moodle), cultivate critical thinking, and introduce medical dictionary named “Medical Glossary” to EFL learners. These pedagogical implications and recommendations can

help EFL teachers design effective instructional interventions to develop EFL learners' lexical competence in medical discourse.

### **Conclusion**

All the results drawn from this study, as obtained through the SPSS programme and discussed, confirm that: first, our sample is normally distributed when using three different tests; Shapiro-Wilk test, Kolmogorov-Smirnov test, histograms, and Q-Q plots. Second, the treatment we have implemented on first-year EFL learners to enrich their lexical competence has proved its effectiveness. The treatment significantly improved first-year EFL learners' lexical competence and heightened their awareness of pathologies, crises, pandemics, and various other vocabulary-related to this specialized field. Additionally, the study encouraged EFL learners to explore not only literary topics but also scientific ones, such as medicine and health care, which became particularly relevant during the COVID-19 pandemic. In summary, the research has increased EFL learners' awareness of medical terminology and introduced them to new terms associated with COVID-19, including “pandemic”, “epidemic”, “containment”, “lockdown”, and “vaccination”.

# **General Conclusion**

## **General Conclusion**

The COVID-19 pandemic has significantly impacted global education, requiring swift adaptation to remote learning, new teaching methods, and evolving health guidelines. It exposed gaps in education systems and prompted innovation, showcasing the adaptability of global learning environments (Bozkurt et al., 2022, p. 883).

Medical discourse is more than simply a collection of isolated terminology; it is complicated, socially integrated, and highlighted by the COVID-19 context. In order to equip EFL learners to deal with real-life health situations, it is important to teach them medical terminology both during and after the epidemic. This requires a strategy that combines linguistic expertise with an awareness of the social and cultural ramifications.

The COVID-19 pandemic has affected the teaching-learning process. That is, from face-to-face to e-learning then blended learning. The changed format has urged us to touch the content of teaching oral expression in EFL classes. The present study was an attempt to shed light on the importance of medical discourse in EFL classes and its effects in enhancing their lexical competence inside and outside classes.

The present study aimed to explore the impact of integrating medical discourse into first-year EFL classes at MKUB to enhance students' lexical competence, particularly in light of the COVID-19 pandemic. By addressing healthcare topics such as pandemics, viruses, and vaccinations, the study sought to improve learners' communicative compe-

tence in both formal and informal settings, as well as their ability to engage in meaningful discussions about health-related issues.

The research successfully answered its key questions: (1) The implementation of medical discourse in EFL classes, particularly during the COVID-19 pandemic, had a significant impact on students' lexical competence. (2) Exposure to specialized medical vocabulary not only enriched learners' lexicons but also improved their ability to communicate on healthcare and pandemic-related topics. (3) Through classroom observations, it was evident that students' development in lexical competence was reflected in their oral presentations, as they used medical terms with greater accuracy and confidence. (4) Additionally, students had generally positive perceptions of incorporating medical discourse into their lessons, appreciating the real-world relevance and the enhancement of their communication skills.

The findings revealed that students responded positively to this innovative approach, which not only increased their vocabulary but also raised their awareness of healthcare terminology, a crucial skill in real-world crises like the COVID-19 pandemic. The alternative hypothesis ( $H_1$ : If EFL oral expression students are exposed to medical discourse, they will develop their lexical competence.) was accepted, as students were able to engage meaningfully in discussions on healthcare topics after being exposed to medical discourse.

However, the study had some limitations. The small sample size ( $n=15$ ) of first-year EFL students might limit the generalizability of the findings. Additionally, the two-month treatment (in a blended way) period may not have been long enough to fully observe the long-term retention of medical vocabulary.

Potential improvements for future studies include a longer treatment period and a larger, more representative group to better assess the sustained impact of medical discourse on students' language proficiency. Despite these limitations, the study provides valuable insights into the importance of adapting EFL curricula to include specialized language relevant to current global challenges, ultimately preparing learners for effective communication in a healthcare context.

Introducing medical discourse to first-year EFL learners necessitates a careful and thorough strategy that incorporates technology, interactive learning techniques, authentic materials, and providing medical vocabulary via medical dictionary. EFL teachers can effectively help their learners build lexical competence and get ready for successful communication in healthcare environments by:

### **Pedagogical Implications and Recommendations**

The present study investigates the effectiveness of implementing medical discourse to enhance first year EFL learners' lexical competence during the COVID-19 and in the post era. Thus, the research work is made to bring EFL learners with effective and updated topics which help them to be able to communicate in different topics especially in topics which are common among all people like the case of the pandemic when every person was debating about symptoms, treatment, recovery, and how to protect oneself from the virus. The findings of this study have significant implications for improving EFL learners' lexical competencies in the area of medicine and health care, including the following:

- Focus on the linguistic of medical discourse
- Teach specialized medical vocabulary

- Use practical projects to promote English use in the medical setting
- Needs analysis (NA)
- Authentic materials
- Vocabulary building
- Incorporate technology and online platforms
- Cultivate critical thinking
- English for specific purposes (ESP)
- Change to the Positive
- Medical dictionary: “Medical Glossary”

Let us explain each in isolation.

### **1. Focus on the Linguistic of Medical Discourse**

Focusing on the Linguistics of Medical Discourse entails placing a special emphasis on the linguistic traits and aspects to the medical area. This method recognizes communication in the healthcare topic, or medical discourse, has its own lexicon, communication styles, and linguistic standards. Thus, teaching first year EFL learners linguistic medical discourse helps them to become more proficient communicators in medical environments. For instance, teaching learners specialized vocabulary used in the medical field, display specific language function like doctor-patient communication which bridges for effective understanding to the linguistic of medical discourse.

## **2. Teach Specialized Medical Vocabulary**

Good communication in medical settings requires a wide range of specialized vocabulary, which is included in medical discourse. To support EFL learners in gaining and developing lexical competency, EFL teachers are required to concentrate on teaching them this vocabulary. Thus, the educational process of introducing and teaching first year EFL learners with the precise and sophisticated terminology utilized in the medical field. This method acknowledges the value of developing a fundamental knowledge of medical language, which is necessary for efficient communication in medical settings.

## **3. Use Practical Projects to Promote English Use in the Medical Setting**

It entails the use of practical projects, such as presenting oral performances related to health care, COVID-19, or at the emergency room in the hospital to promote English use in the medical setting. These projects can help EFL learners develop their lexical competence and improve their ability to communicate in medical setting. COVID-19 was the starting point of introducing medical and health care topics to EFL learners. The pandemic changed many things in the educational system even the content of the syllabus. A need to introduce new medical terms via a dictionary called “Medical Glossary” to EFL learners using different videos and written articles.

## **4. Needs Analysis (NA)**

NA seeks to identify the nature of the course’s content, resources, and delivery mode, as well as the learners’ personalities, interests, and goals for taking the course. The linguistic description and the expected proficiency level are also covered in this section. Despite its usage in other fields of education, it is considered essential to ESP. EFL teach-

ers are asked to conduct a thorough needs analysis to understand the specific linguistic and communicative needs of their EFL learners in the field of medicine and health care to identify their current proficiency level and the lexical gaps. Richards et al. (2011) define NA as finding out what a student or class needs a language for and then ranking those requirements in order of importance (pp. 353-354).

### **5. Authentic Materials**

Incorporate real-world language use in medical contexts for learners by using authentic medical content like videos and articles related to COVID-19 and pandemic. Building real and pertinent medical vocabulary is aided by this. The pandemic which lasted for three years (from 2019 until 2021) was considered as real situation where first year EFL learners talked about their personal experiences using medical terms related to the pandemic, COVID-19, health care during this pandemic, or therapies.

### **6. Vocabulary Building**

Create lists of vocabulary related to medical discourse, such as those used in health care, COVID-19, pandemic, patient encounters, diagnosis, and therapies. Through exercises and activities, such as gap filling, matching, and multiple choices, that bridge for EFL learners the chance to practice and reinforce this particular language.

### **7. Incorporate Technology and Online Platforms**

Using Moodle platform, the Algerian official platform in higher, for virtual learning and allow first year EFL learners gain access to their lectures via the platform. The pandemic was the starting point for blended learning. This exposes EFL learners to the most recent developments in communication as well as the technology instruments uti-

lized in the healthcare industry (COVID-19).

### **8. Cultivate Critical Thinking**

Encourage critical thinking by urging first year EFL learners analyze medical texts, assess research papers or videos, and have ethical discussions about healthcare issues. This promotes a deeper comprehension of medical discourse in addition to acquiring medical lexicon. Cultivate critical thinking describes the deliberate and methodical growth of EFL learners' critical thinking, information analysis, and deductive reasoning skills. In an educational setting, developing critical thinking skills entails helping learners to adopt an attitude that challenges, assesses, and interprets information rather than taking or accepting it as it is (passive accepting).

### **9. English for Specific Purposes (ESP)**

ESP is a new trend in English Language Teaching (ELT) designed to cater to specific learners' learning needs in academic and occupational applications. English has become a global language, recognized for its ability to bring people together through sharing ideas and building cultural and communicative bridges, surpassing other languages. Through the present study, EFL teachers are required to adopt the use of ESP in oral expression as a new strategy which is appropriate for conversation in medicine. Emphasize on the vocabulary and linguistic abilities required for certain medical situations, such as conference presentations, medical writing, and patient consultations.

### **10. Change to the Positive**

COVID-19 brought with it new way of teaching and a different content of communication among people. It is necessary to consider crisis and COVID-19 as positive

change at least at the level of EFL classes. The pandemic had a positive impact in EFL classes where EFL learners were exposed to medical discourse via suggesting different topics related to medicine, health care and COVID-19. First year EFL learners were asked to speak about their own experiences during this global pandemic. It gives them direct exposure to real medical language and conversation.

### **11. Medical Dictionary: “Medical Glossary”**

Introducing medical dictionary to EFL learners via videos and article is of great help in their communication and exchange information about topics related to health care and COVID-19. A list of medical vocabulary obtained from the shared videos and articles of the present study is presented in the list of appendices (see Appendix H).

During the COVID-19 pandemic, it became abundantly clear how important it is to incorporate health-related vocabulary and medical terminology into EFL curriculum, especially during emergency situations. A solid foundation in health-related communication is essential for EFL learners. This entails not just knowing how to communicate themselves in English, but also how to navigate formal medical interviews and grasp medical terminology. Incorporating role-playing or simulations of medical interviews into EFL teaching could help learners gain confidence in these types of interactions. For example, students could practice responding to physician-initiated questions or describing symptoms in English. This would make them more comfortable in real-world medical settings, especially during public health emergencies like the pandemic.

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# APPENDICES

## Appendix A: Online Article

Click on the link below to read the full article.

<https://www.asjp.cerist.dz/en/article/207332>

## Appendix B: Students' Questionnaire

1. Being a 1st year learner in EFL classes, did you like the topics you have dealt with during the 1st term in oral sessions?
2. Have you ever thought of tackling science topics like medical discourse?
3. Did you like the idea of receiving videos/ texts related to medicine and health care outside the class?
4. Do you agree that there was a sudden and urgent change in our live because of COVID-19?
5. Do you agree that most people (if not all) communicate about the pandemic?
6. Were you interested in medicine and health care before the pandemic?
7. To what extent do you agree/ disagree/ with the following statements:

*SA: Strongly agree, A: Agree, N: Neutral, D: Disagree, SD: Strongly disagree, &: And*

Statements	SA	A	N	D	SD
1. I can communicate & perform food topic					
2. I can communicate & perform culture topic					
3. I can communicate & perform travel topic					
4. I can communicate & perform T.V program					
5. I can communicate & perform medical issues					
6. I can communicate & perform crisis like the COVID-19 pandemic topic					

## Appendix C: Pre-Test Activities

### Activity 1: *choose the right option:*

1. People who show no signs of a given disease are:
  - Asymptomatic
  - Unsymptomatic
  - Unsympathetic
2. What is a virus?
  - COVID-19
  - Influenza
  - coronavirus
3. What is a disease?
  - COVID-19
  - SARS-CoV-2
  - coronavirus
4. SARS-CoV-2 can ..... humans.
  - Defect
  - Effect
  - Infect
5. Which is most widespread?
  - an outbreak
  - an epidemic
  - a pandemic

### Activity 2: *Match the terms with their definitions:*

a. Community spread / b. Crises / c. Symptoms / d. Outbreak / e. Pandemic /  
 f. Patient zero / g. Contagious / h. Social distancing / i. Virus / j. SARS-CoV-2  
 / k. COVID-19 / l. Hospitalized / m. Diagnose / n. Transmission / o. Isolation /  
 p. Coronavirus / q. Symptoms /

1. .... : able to spread through contact with people or other living thing.
2. .... : illnesses that are often not serious, but sometimes can be life-threatening.

3. .... : dangerous or unstable times or situations that demand attention.
4. .... : placed in a hospital for treatment.
5. .... : specific signs of illness or injury.
6. .... : separation of infected people from healthy people for serious contagious diseases like COVID-19.
7. .... : a sudden occurrence of a disease (or other unpleasant thing).
8. .... : occurrence of a particular disease throughout a whole country or the world.
9. .... : official name for the novel coronavirus disease that emerged in China in 2019.
10. .... : identify an illness by examining the symptoms.
11. .... : the person identified as the first to become infected with a disease in an outbreak .
12. .... : Severe Acute Respiratory Syndrome CoronaVirus 2; final official name for the coronavirus that causes COVID-19.
13. .... : practice of encouraging people to minimize contact and closeness, whether by banning large or even small groups/meetings (football matches, nightclubs), or by maintaining a minimum distance between people (for example one metre or two metres).
14. .... : a physical or mental feature that indicates illness/disease.
15. .... : transfer of a disease from animal to human or from human to human.
16. .... : a living thing, too small to be seen without a microscope, that causes infectious disease in animals and humans.
17. .... (noun): transmission of a disease directly within a community and not by importation from a foreign source.

**Activity 3: Gap filling**

**diagnostic / contagious / indoors / contaminated / spread / airborne / testing methods / transmits / virus / symptoms**

COVID-19 ..... when people breathe in air .....  
by droplets and small ..... particles containing the virus. The risk

of breathing these in is highest when people are in close proximity, but they can be inhaled over longer distances, particularly ..... Transmission can also occur if splashed or sprayed with contaminated fluids in the eyes, nose or mouth, and, rarely, via contaminated surfaces. People remain ..... for up to 20 days, and can ..... the ..... even if they do not develop .....

Several ..... have been developed to diagnose the disease. The standard ..... method is by detection of the virus' nucleic acid by real-time reverse transcription polymerase chain reaction (rRT-PCR), transcription-mediated amplification (TMA), or by reverse transcription loop-mediated isothermal amplification (RT-LAMP) from a nasopharyngeal swab.

## Appendix D: Post Test Activities

### Activity 1: *choose the right option:*

1. The word "*quarantine*" comes from
  - the number *40*
  - the term *guarantee*
  - the fraction *quarter*
2. After showing symptoms he was told to ..... for 14 days.
  - Quarantine
  - Self-isolate
  - Stay in home
3. A person with ..... of a disease may have that disease.
  - symptoms
  - sign
  - a change
4. A disease that can be transmitted to humans from animals is:
  - Hypnotic
  - Stenotic
  - Zoonotic
5. He was happy to learn that his mother tested ..... for this coronavirus.
  - Negative

- Positive
- Successfully

**Activity 2: Match the terms with their definitions:**

**a. Detect / b. Zoonotic / c. Vaccine / d. Person-to-person / e. Mask / f. Self-isolate / g. Immune / h. Lockdown / i. PCR test / j. Treatment / k. Coronavirus / l. Quarantine / m. Contagious / n. Epidemic / o. Pathogen / p. Test negative / q. Test positive / r. Viral**

1. .... : any of group of viruses that cause respiratory infections and other.
2. .... : notice or discover the presence of something.
3. .... : protected from or resistant to something.
4. .... : describing a disease that can pass from person to person, usually by direct contact; describing a person with such a disease.
5. .... : describing a disease that can be transmitted from animals to humans.
6. .... : a substance used to protect humans and animals from a disease .
7. .... : if you take a test for an infection and you test negative, that means you do not have the infection. If you test positive, that means you have the infection.
8. .... : isolate oneself; put oneself in quarantine, away from other people.
9. .... : describing the spread of a disease from one person to another, typically through touch including shaking hands, kissing, sexual intercourse etc.
10. .... : isolation and monitoring of people who seem healthy but may have been exposed to an infectious disease to see if they develop symptoms.
11. .... : a micro-organism or germ such as a bacterium or virus that can cause disease .
12. .... : occurrence of a particular disease in a large number of people in a particular area.

13. .... : a piece of fibre or cloth that fits over the nose and mouth to protect other people from the wearer's germs and/or the wearer from germs in the air.
14. .... : official restriction of movement within or access to an area in the interests of public health.
15. .... : medical care given to a patient for an illness or injury .
16. .... : describing something like, caused by, or relating to a virus or viruses.
17. .... : test that detects viral particles in blood or other body fluids. (polymerase chain reaction)

### Activity 3: *Gap filling*

**pneumonia / organs / respiratory failure / breathing difficulties / hypoxia / infected / ongoing pandemic / taste / contagious / loss of smell / dyspnea /**

Coronavirus disease 2019 (COVID-19) is a ..... disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The first known case was identified in Wuhan, China, in December 2019. The disease has since spread worldwide, leading to an .....

Symptoms of COVID-19 are variable, but often include fever, cough, headache, fatigue, ....., and ..... and ....., Symptoms may begin one to fourteen days after exposure to the virus. At least a third of people who are ..... do not develop noticeable symptoms. Of those people who develop symptoms noticeable enough to be classed as patients, most (81 %) develop mild to moderate symptoms (up to mild ....., ), while 14 % develop severe symptoms ( ....., , or more than 50 % lung involvement on imaging), and 5 % suffer critical symptoms ( ....., , shock, or multiorgan dysfunction). Older people are at a higher risk of developing severe symptoms. Some people continue to experience a range of effects (long COVID) for months after recovery, and damage to ..... has been observed. Multi-year studies are underway to further investigate the long-term effects of the disease.

### Appendix E: List of Suggested Topics for Oral Performance

**W** COVID-19: A Challenging Pandemic

How has COVID-19 impacted life around the world?

Analyze

**Reading A-Z**

**W** COVID-19: A Challenging Pandemic

What causes a disease to become a pandemic?

Cause and Effect

**Reading A-Z**

**W** COVID-19: A Challenging Pandemic

Why do you think the author states, "During the pandemic, everyone has a role to play to stop the spread of disease"?

Author's Point of View

**Reading A-Z**

**W** COVID-19: A Challenging Pandemic

Why should there be a global effort to detect and stop COVID-19?

Evaluate

**Reading A-Z**

**W** COVID-19: A Challenging Pandemic

How did the United States initially respond to the pandemic?  
How did this impact the spread of COVID-19?

Main Idea and Details

**Reading A-Z**

**W** COVID-19: A Challenging Pandemic

How do past and present pandemics compare?

Compare and Contrast

**Reading A-Z**

**Appendix F: Classroom Observation Report**

**1. The use of ICT to facilitate the presentation of medical terms**

.....  
 .....  
 .....

**2. The interaction between first-year EFL learners about health care, COVID-19, and pandemic topics**

.....  
 .....  
 .....

**3. The use of Moodle platform during the online learning**

.....  
 .....  
 .....

**Appendix G: Classroom Observation Checklist**

Mohamed Khider University-Biskra

Department of English

Level: .....

Participants: Experiment Group

Session N°: .....

Observer: Mrs. Yasmina BENZIDA

*Note: ✓: observed / ✗: not observed*

Aspects (not) to be observed	✓	✗	Participants (n = 15)
1. Poor communication about the pandemic			
2. Confusing when required explaining or providing comment about the article or/and videos			
3. Difficulty of using words appropriately in sentences related to COVID-19			
4. Learners use vocabulary from the posted videos and articles on Moodle			
5. Learners depend on the online debate which occurred among learners in the chat room on Moodle			
6. Self confidence when performing topic about the pandemic			

## Appendix H: Medical Glossary

1. **A chest X-ray:** is a diagnostic imaging test that uses a small amount of ionizing radiation to create detailed images of the chest, including the lungs, heart, blood vessels, and bones. It is a commonly performed medical imaging procedure used to assess and diagnose various respiratory and cardiac conditions, as well as to detect abnormalities or injuries within the chest cavity. Chest X-rays are a valuable and commonly used tool in medical imaging, offering insights into the health of the respiratory and cardiovascular systems. They are often the initial imaging test performed when evaluating chest-related symptoms or conditions.
2. **A cough:** is a reflex action that involves the rapid expulsion of air from the lungs to clear the airways of irritants, mucus, or foreign substances. Coughing is a common protective mechanism to prevent respiratory problems.
3. **A fever:** a particular type of disease in which somebody has a high temperature. That is, a medical condition in which a person has a temperature that is higher than normal.
4. **A medical practitioner:** refers to an individual who practices medicine as a profession. This term encompasses a wide range of healthcare professionals who are qualified and authorized to diagnose, treat, and prevent illnesses and injuries. Medical practitioners undergo extensive education, training, and licensure to ensure their competency in providing medical care. The specific types of medical practitioners can vary based on their qualifications and roles in the healthcare system.
5. **A mild sore throat:** refers to a slight or minor discomfort, irritation, or pain in the throat. It is a common symptom that many people experience, and it is often characterized by a scratchy or dry feeling, pain, or irritation in the throat. The term "mild" indicates that the discomfort is not severe or intense. In most cases, a mild sore throat is a self-limiting condition that improves on its own within a few days.
6. **A rash:** is a change in the skin's colour or texture, often characterized by redness, itching, and inflammation. Rashes can result from various causes, including allergies, infections, autoimmune disorders, or contact with irritants.
7. **A runny nose:** also known as rhinorrhea, refers to the condition where there is an excessive discharge of mucus from the nasal passages. It is a common symptom of various respiratory infections, allergies, or irritants that can lead to an overproduction of nasal mucus.

8. **A secondary infection:** refers to an additional infection that occurs in an individual who is already affected by a primary infection. The primary infection may weaken the immune system or create conditions that make the individual more susceptible to other infectious agents. As a result, a secondary infection can occur, often complicating the existing health condition.
9. **A sneeze:** is a sudden, forceful expulsion of air from the lungs through the nose and mouth. It is a reflex response typically triggered by irritation in the nasal passages. Sneezing is a natural and protective mechanism that helps the body to expel irritants, such as allergens, dust, or infectious agents, from the respiratory system.
10. **A temperature reading:** refers to the measurement of a person's body temperature using a thermometer. It is a numerical value that indicates the degree of heat within the body. Body temperature readings are often expressed in units such as degrees Celsius ( $^{\circ}\text{C}$ ) or degrees Fahrenheit ( $^{\circ}\text{F}$ ). Temperature readings include:
  - a) **Measurement Device:** The temperature of the body is typically measured using a thermometer. Different types of thermometers, such as oral, ear, forehead, or rectal thermometers, may be used to obtain temperature readings.
  - b) **Normal Body Temperature:** The normal body temperature can vary slightly from person to person and is influenced by factors such as age, activity level, and the time of day. In general, the average normal body temperature is around  $98.6^{\circ}\text{F}$  ( $37^{\circ}\text{C}$ ).
  - c) **Fever:** An elevated body temperature, commonly referred to as a fever, is often an indication that the body is responding to an infection or illness. A fever is generally defined as a body temperature higher than  $100.4^{\circ}\text{F}$  ( $38^{\circ}\text{C}$ ).
  - d) **Measurement Locations:** The accuracy of temperature readings can depend on the location where the measurement is taken. For example, oral, rectal, and ear measurements are common methods.
  - e) **Monitoring Health:** Regular temperature readings are commonly used to monitor an individual's health, especially when they are feeling unwell. Significant changes in body temperature may be an early sign of illness.
  - f) **Environmental Factors:** External factors, such as exposure to hot or cold environments, can temporarily affect body temperature readings.

It's important to follow the specific instructions provided with the thermometer being used to ensure accurate and reliable temperature readings. Additionally, any concerns about body temperature or symptoms of illness should be discussed with a healthcare professional for proper evaluation and guidance.

11. **A ventilator:** also known as a mechanical ventilator or respirator, is a medical device that provides mechanical ventilation by assisting or replacing the spontaneous breathing of a patient. It is commonly used in critical care settings, such as intensive care units (ICUs), to support patients who are unable to breathe adequately on their own. Ventilators deliver a controlled mixture of air and oxygen to the patient's lungs, helping to maintain proper oxygen levels and remove carbon dioxide. They are crucial in treating conditions that affect respiratory function, such as severe pneumonia, acute respiratory distress syndrome (ARDS), or during certain surgical procedures.
12. **Abdominal pain:** refers to discomfort or pain felt in the area between the chest and the pelvis, commonly known as the abdomen. It is a symptom rather than a specific diagnosis and can arise from various organs and structures within the abdominal cavity. Abdominal pain can range from mild and temporary to severe and persistent, and it is often an indication of an underlying medical condition.
13. **ACE2:** refers to Angiotensin-Converting Enzyme 2, which is a key protein involved in the renin-angiotensin-aldosterone system (RAAS). It plays a crucial role in regulating blood pressure and fluid balance. ACE2 gained significant attention during the coronavirus pandemic, particularly in relation to the entry of the SARS-CoV-2 virus into human cells.
14. **Achy:** is an adjective used to describe a mild, persistent, or dull pain or discomfort in the muscles or joints.
15. **Acute cardiac injury:** refers to damage or impairment of the heart muscle (myocardium) that occurs suddenly and is often associated with a significant event or medical condition. This term is commonly used in the context of cardiac health and is indicative of acute damage to the heart tissue. Acute cardiac injury can manifest through various clinical markers and symptoms, and it is often associated with conditions such as heart attacks or severe stress on the heart.
16. **Air sacs:** typically refers to the microscopic structures within the lungs known as alveoli. Alveoli are small, thin-walled sacs where the exchange of oxygen and carbon dioxide takes place during the process of respiration.
17. **Airways:** refers to the passages through which air moves in and out of the lungs during the process of breathing. The airways are crucial components of the respiratory system, facilitating the exchange of oxygen and carbon dioxide between the lungs and the external environment.

18. **Blood coagulation:** also known as blood clotting, is a complex physiological process that involves the formation of a blood clot to prevent excessive bleeding when a blood vessel is injured. This crucial mechanism helps maintain the integrity of the circulatory system and prevents the loss of blood from the body.
19. **Bloodstream:** refers to the circulating blood within the vascular system of an organism, including humans. It is a complex network of blood vessels, including arteries, veins, and capillaries, through which blood is pumped by the heart. The bloodstream plays a fundamental role in transporting essential substances throughout the body, including oxygen, nutrients, hormones, and waste products. Blood, composed of red and white blood cells, platelets, and plasma, carries out vital functions such as oxygenation, nutrient delivery, immune response, and waste removal. The efficient functioning of the bloodstream is crucial for maintaining overall health and sustaining the physiological processes of the body.
20. **Body pain:** refers to the sensation of discomfort, soreness, or ache that is experienced throughout the body. It is a common symptom that can result from various causes, including injuries, illnesses, inflammatory conditions, infections, or other underlying health issues. Body pain can range from mild to severe and may be localized to specific areas or affect the entire body.
21. **Carbon dioxide:** (CO<sub>2</sub>) is a colorless, odorless gas composed of carbon and oxygen molecules. It is a naturally occurring component of Earth's atmosphere and plays a crucial role in various biological and environmental processes.
22. **Carrier (noun):** a person or animal that transmits a disease to others, whether suffering from it themselves or not - *People who are asymptomatic can still be carriers.*
23. **Carry (verb):** be infected with a disease and able to transmit it to others, whether symptomatic or asymptomatic - *Some people may carry coronavirus without knowing it.*
24. **Chills:** refer to a sensation of feeling cold or experiencing shivering or rigors. It is often associated with a rapid onset of coldness and shaking, which may be accompanied by visible shivering or trembling.
25. **Chronic lung:** related to conditions or diseases affecting the lungs.
26. **Coexisting medical conditions:** refers to the presence of multiple medical conditions or illnesses in an individual simultaneously. These conditions can be chronic

or acute, and they may affect different organ systems or aspects of health. The term is often used to describe the coexistence of two or more medical diagnoses or health issues within the same individual.

27. **Cold:** refers to a common viral infection primarily affecting the upper respiratory tract. It is also known as the common cold. The common cold is caused by various viruses, with rhinoviruses being the most common culprits. Other viruses, such as coronaviruses and adenoviruses, can also contribute to cold infections.
28. **Community spread (noun):** transmission of a disease directly within a community and not by importation from a foreign source - *With this many new positive cases, the evidence suggests that we now have community spread right here in our county.*
29. **Consult:** the term “consult” refers to a professional interaction between healthcare providers, often involving a specialist, with the purpose of seeking or providing expert advice, evaluation, or opinion about a patient’s diagnosis, treatment, or management.
30. **Contact tracing (noun):** identification and monitoring of people who may have had contact with an infectious person - *By insisting on strict contact tracing as soon as someone was potentially infected, they managed to control the spread of the disease.*
31. **Contagious:** refers to the ability of a disease or condition to be easily transmitted from one person to another. A contagious disease is one that can be spread through various means, such as respiratory droplets, direct contact, or contact with contaminated surfaces.
32. **Contagious (adjective):** describing a disease that can pass from person to person, usually by direct contact; describing a person with such a disease. See infectious - *Patients who are still contagious are kept in isolation.*
33. **Coronavirus (n.):** any of group of viruses that cause respiratory infections and other illnesses that are often not serious, but sometimes can be life-threatening.
34. **COVID-19:** or Coronavirus Disease 2019, is a highly contagious respiratory illness caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The disease was first identified in December 2019 in Wuhan, China, and it subsequently led to a global pandemic.

35. **COVID-19** (noun): official name for the novel coronavirus disease that emerged in China in 2019. **COVID-19 = CO**rona**VI**rus **D**isease-2019 - *All countries are requested to report any new confirmed case of COVID-19 within 48 hours.*
36. **Crankiness**: refers to a state of irritability, moodiness, or being easily agitated. It is a non-specific term used to describe a person's irritable or grouchy demeanor.
37. **Crises** (n.): dangerous or unstable times or situations that demand attention.
38. **Dehydration**: is a condition characterized by an insufficient amount of fluid (water) in the body to maintain normal bodily functions. It occurs when the loss of fluids exceeds the intake, leading to an imbalance in the body's water content.
39. **Detect** (v.): to notice or discover the presence of something.
40. **Diagnose** (verb): identify an illness by examining the symptoms - *Only a medical professional can properly diagnose the cause of your problem.*
41. **Diagnosis**: the act of discovering or identifying the exact cause of an illness.
42. **Diarrhea**: also "diarrhoea" is a medical term that refers to the passage of loose, watery, and frequently more frequent stools than usual. It is a common digestive symptom that can be caused by various factors, including infections, dietary issues, medications, and underlying medical conditions affecting the gastrointestinal tract. It's essential to note that diarrhea is a symptom rather than a specific diagnosis. Determining the underlying cause of diarrhea is crucial for appropriate management and resolution of the symptoms. Individuals experiencing persistent or recurrent diarrhea should consult with a healthcare professional for a thorough evaluation and guidance.
43. **Discoloration of fingers**: typically refers to a change in the normal color of the skin on the fingers. This discoloration can manifest in various ways and may be indicative of different underlying conditions.
44. **Disease** (n.): an illness.
45. **Dizziness**: is a term used to describe a range of sensations, including lightheadedness, unsteadiness, feeling faint, or a spinning sensation. It is often associated with a temporary loss of balance or a feeling of being off-balance.
46. **Dry cough**: refers to a cough that does not produce phlegm or mucus. It is characterized by the absence of the typical wet or productive cough sounds, and the cough sounds may be harsh or irritating. Unlike a productive cough, which helps clear

mucus or foreign substances from the airways, a dry cough may not effectively remove any material from the respiratory system.

47. **Dyspnea:** is a medical term that refers to the subjective sensation of difficulty or discomfort in breathing. It is commonly described as shortness of breath or breathlessness. Dyspnea can be a distressing symptom that may occur with various underlying medical conditions affecting the respiratory or cardiovascular systems.
48. **Epidemic** (noun): occurrence of a particular disease in a large number of people in a particular area. See outbreak , pandemic - *The city was devastated by an epidemic of cholera in the 19th century.*
49. **Essential** (adj.): necessary.
50. **Fatality cases:** refer to instances in which an individual or a group of individuals experience a fatal outcome, typically resulting from a disease, accident, disaster, or other adverse events. The term "fatality" is used to describe the condition of being fatal or causing death.
51. **Fatigue:** refers to a state of extreme tiredness or lack of energy that goes beyond normal tiredness. It is a subjective feeling of physical or mental exhaustion that can significantly impact a person's ability to function and perform daily activities.
52. **Flu:** Influenza, commonly known as the flu, is a highly contagious respiratory illness caused by influenza viruses. The flu can affect the nose, throat, and sometimes the lungs. It is characterized by a sudden onset of symptoms and can range from mild to severe.
53. **Headache:** is a common symptom characterized by pain or discomfort in the head or upper neck region. Headaches can vary in intensity, duration, and specific location. They may be isolated occurrences or recurrent, and they can be a result of various factors, including underlying medical conditions, lifestyle factors, or environmental triggers.
54. **Hospital discharge:** refers to the process by which a patient is released from a hospital and deemed medically stable to continue their recovery at home or in another healthcare setting. It involves the formal release of a patient from the hospital's care, with instructions for ongoing treatment, medication, and follow-up care.
55. **Hospitalized** (v.): placed in a hospital for treatment.

56. **ICU:** the Intensive Care Unit (ICU) involves comprehensive medical care to address the respiratory, cardiovascular, and other systemic effects of the virus. Patients in the ICU with severe COVID-19 may experience acute respiratory distress syndrome (ARDS) and other complications, requiring advanced medical interventions.
57. **Imaging tests:** also known as medical imaging or diagnostic imaging, refer to a variety of techniques used in healthcare to create visual representations of the interior of a body for clinical analysis and medical diagnosis. These tests provide detailed images of organs, tissues, bones, and other structures, allowing healthcare professionals to assess the presence of abnormalities, diseases, or injuries.
58. **Immune** (adj.): protected from or resistant to something.
59. **Immune systems:** is a complex network of cells, tissues, and organs that work together to defend the body against harmful pathogens, such as bacteria, viruses, fungi, and parasites. Its primary function is to recognize and eliminate or neutralize foreign invaders while distinguishing them from the body's own cells and tissues.
60. **Inflammation:** is a complex biological response that occurs in the body as a protective and healing mechanism in response to injury, infection, or harmful stimuli. It is a fundamental part of the immune system's response to maintain tissue homeostasis and repair damaged cells and tissues.
61. **Inhabit** (v.): to occupy or live in.
62. **Ischemia:** refers to a condition in which there is an insufficient blood supply to a specific organ or part of the body, leading to a reduced supply of oxygen and nutrients to the affected tissue. This inadequate blood flow can result from various factors, such as blockage or narrowing of blood vessels, reducing the delivery of oxygen-rich blood to the tissues.
63. **Isolate** (v.): keep an infected person away from healthy people - *They will isolate anyone suspected of having the disease.*
64. **Isolation** (n.): separation of infected people from healthy people for serious contagious diseases like COVID-19 - *Travellers arriving from the infected area were immediately put in isolation.*
65. **Kidney Injury:** also known as acute kidney injury (AKI) or acute renal failure, refers to a sudden and often reversible decline in kidney function. This condition is characterized by a rapid reduction in the kidneys' ability to filter and eliminate waste products and excess fluids from the blood. Acute kidney injury can occur

as a result of various underlying causes, and it is a serious medical condition that requires prompt evaluation and management.

66. **Lockdown** (n.): official restriction of movement within or access to an area in the interests of public health - *Sweden was one of the few countries that did not impose blanket lockdowns.*
67. **Loss of appetite:** also known as anorexia, refers to a reduced or diminished desire to eat, leading to a decreased intake of food. It is a common symptom that can be associated with various underlying causes, both physical and psychological. Loss of appetite can affect individuals of all ages and may be temporary or persistent.
68. **Lungs:** are vital organs in the respiratory system responsible for the exchange of gases, primarily oxygen and carbon dioxide, between the air and the bloodstream. They play a crucial role in the process of respiration, enabling the body to take in oxygen for cellular function and expel carbon dioxide, a waste product of metabolism.
69. **Mask** (n.): a piece of fibre or cloth that fits over the nose and mouth to protect other people from the wearer's germs and/or the wearer from germs in the air - The World Health Organization have historically offered *varying advice on whether or when people should wear masks.*
70. **Molecules:** is a group of two or more atoms held together by chemical bonds. Molecules are the building blocks of matter and play essential roles in various biological processes within the human body.
71. **Nausea:** is a term that refers to the feeling of discomfort or unease in the stomach, often accompanied by an inclination to vomit. It is a subjective sensation that can be triggered by various factors, including illness, motion, certain smells, or the sight of something unpleasant.
72. **NHLBI:** stands for the National Heart, Lung, and Blood Institute. The NHLBI is one of the 27 Institutes and Centers that make up the National Institutes of Health (NIH) in the United States. It is a government agency that conducts and supports research related to the prevention, diagnosis, and treatment of diseases affecting the heart, blood vessels, lungs, and blood. The NHLBI's mission is to advance scientific knowledge and improve public health through research.
73. **Nurse:** is a healthcare professional who is trained and licensed to provide medical care, support, and assistance to individuals, families, and communities. Nurses play

- a crucial role in the healthcare system and are involved in various aspects of patient care, health promotion, and disease prevention.
74. **Outbreak** (noun): a sudden occurrence of a disease (or other unpleasant thing). *See epidemic , pandemic - There was another outbreak of the disease in 1993 but the cause was uncertain.*
  75. **Painful**: is an adjective used to describe something that causes physical or emotional discomfort, distress, or suffering. It indicates the presence of pain, which is an unpleasant and distressing sensation that can result from various stimuli or conditions. Painful experiences can be characterized by a range of sensations, including sharp or dull discomfort, throbbing, aching, or soreness; causing you pain.
  76. **Pandemic** (noun): occurrence of a particular disease throughout a whole country or the world. *See epidemic , outbreak - Just after the First World War there was a pandemic of flu which killed up to 40 million people worldwide.*
  77. **Pathogen**: is a biological agent, typically a microorganism, that causes disease in its host. Pathogens can include various types of microorganisms, such as bacteria, viruses, fungi, protozoa, and parasites, each with the ability to invade and reproduce within the host organism. The presence of pathogens in the body can lead to infection and the development of various diseases.
  78. **Pathogen** (noun): a micro-organism or germ such as a bacterium or virus that can cause disease - *Fortunately, most pathogens are dealt with by the body's immune system.*
  79. **Patient zero** (noun): the person identified as the first to become infected with a disease in an outbreak - *Authorities usually try to determine who patient zero was in any given outbreak as can help answer important questions about how, when and why it started.*
  80. **Patients**: refers to individuals who are receiving medical care, treatment, or services from healthcare providers, including doctors, nurses, and other allied health professionals. Patients seek medical attention for various reasons, such as illness, injury, preventive care, or management of chronic conditions.
  81. **PCR test** (noun): test that detects viral particles in blood or other body fluids. (PCR = polymerase chain reaction) - *The PCR test is one of the tools that doctors use to diagnose certain coronavirus diseases.*

82. **Person-to-person** (adjective): describing the spread of a disease from one person to another, typically through touch including shaking hands, kissing, sexual intercourse etc. - *In January an infected American woman returning home from China transmitted the virus to her husband, marking the first known example of **person-to-person** spread of the virus in the USA.*
83. **Personal protective equipment (PPE)** (noun): special clothing, headgear, goggles, masks and other garments that shield people from injury or infection . - *Much of the **PPE** worn by doctors and nurses has to be worn once only and destroyed after use.*
84. **Phlegm**: is a thick, viscous, and sticky substance that is produced by the mucous membranes of the respiratory tract. It is composed of mucin, water, cells, and debris. Phlegm can vary in colour and consistency, ranging from clear and thin to thick and discolored.
85. **Pink eye**: or conjunctivitis, is an inflammation of the conjunctiva, the clear membrane that covers the white part of the eye and lines the inner surface of the eyelids. It can cause the eye to appear pink or red.
86. **Pneumonia**: is an inflammatory condition affecting the air sacs in one or both lungs. It is typically caused by infection, including bacterial, viral, or fungal infections. In pneumonia, the air sacs, also known as alveoli, become filled with pus or other inflammatory fluid, leading to symptoms such as cough, fever, and difficulty breathing.
87. **Professionals** (n.): people in occupations that require special skills, education, or training to perform the work.
88. **Quarantine** (noun): isolation and monitoring of people who seem healthy but may have been exposed to an infectious disease to see if they develop symptoms - *For centuries it's been common for ships arriving from infected areas to be kept in **quarantine** at the docks, originally for 40 days which is where the term comes from.*
89. **Recovering**: refers to the process of returning to a state of health and well-being after an illness, injury, or medical intervention. It indicates a positive progression toward improved health and function. The recovery period can vary in duration and intensity based on the nature and severity of the health condition or medical procedure.

90. **Respiratory distress:** refers to a clinical condition characterized by difficulty in breathing or inadequate breathing that compromises the body's ability to maintain sufficient oxygen levels. It is a serious medical emergency that requires prompt evaluation and intervention. Respiratory distress can affect individuals of all ages, from infants to adults, and may be caused by various underlying medical conditions.
91. **SARS-CoV-2 (noun):** Severe Acute Respiratory Syndrome CoronaVirus 2; final official name for the coronavirus that causes COVID-19 . (This virus was previously known as 2019-nCoV.) - *SARS-CoV-2 is the name of the virus and COVID-19 is the name of the disease.*
92. **Seizures:** also known as convulsions or fits, are sudden, uncontrolled electrical disturbances in the brain that result in abnormal behaviour, movements, or sensations. Seizures can vary widely in severity and may involve loss of consciousness, convulsions, repetitive movements, and other symptoms.
93. **Self-isolate (verb):** isolate oneself; put oneself in quarantine , away from other people - *The prime minister's wife has tested positive for COVID-19 and the couple are now self- isolating and working by phone and Skype.*
94. **Sepsis:** is a potentially life-threatening condition that occurs when the body's response to an infection becomes dysregulated, leading to a systemic inflammatory response. In sepsis, the immune system's reaction to infection can cause widespread inflammation throughout the body, affecting various organ systems and potentially leading to organ dysfunction or failure. That is, an infection of part of the body in which pus is produced.
95. **Serious coughs:** the term "serious coughs" is not a standard medical term. However, coughing itself is a common symptom that can vary in severity and may be associated with various underlying medical conditions. The interpretation of "serious coughs" depends on the overall clinical context and the specific symptoms experienced by the individual. If someone is experiencing persistent or severe coughing, seeking medical attention is advisable for a comprehensive evaluation and appropriate management.
96. **Severe shortness of breath:** refers to an intense and distressing difficulty in breathing. It is a subjective sensation experienced by an individual that their breathing is significantly impaired, and they are struggling to get an adequate amount of air. This sensation can be alarming and is often associated with a feeling of breathlessness, rapid breathing, and the perception of insufficient oxygen intake.

97. **Social distancing** (noun): practice of encouraging people to minimize contact and closeness, whether by banning large or even small groups/meetings (football matches, nightclubs), or by maintaining a minimum distance between people (for example one metre or two metres) - *The government has instructed schools to take social distancing measures to slow the spread of the virus.*
98. **Stiffen:** refers to a condition where there is a reduction in the normal flexibility or suppleness of a body part, often due to increased muscle tension, decreased range of motion, or changes in the connective tissues. This stiffness can affect joints, muscles, or other tissues, leading to a sensation of reduced mobility and resistance to movement.
99. **Superspreader** (noun): person infected with a virus etc who transmits or spreads it to an unusually large number of people - *One so-called "superspreader" in South Korea infected at least 37 people at her church with the virus.*
100. **Symptomatic** (adjective): showing symptoms of a particular disease - *Anyone who is symptomatic is advised to phone a doctor and get tested.*
101. **Symptoms:** refer to subjective indications or signs of a medical condition or disease that are experienced or reported by an individual. Symptoms are often perceived by the affected person and may include various sensations, discomforts, or changes in normal bodily functions. They serve as the individual's expression of how an illness or health condition is affecting their well-being.
102. **Symptoms** (n.): specific signs of illness or injury.
103. **Symptoms** (noun): a physical or mental feature that indicates illness/ disease – *Typical symptoms of COVID-19 are fever, coughing, and shortness of breath.*
104. **Temporarily** (adv.): lasting or occurring for a limited amount of time.
105. **Test negative | Test positive** (verb): if you take a test for an infection and you test negative, that means you do not have the infection. If you test positive, that means you have the infection. - *The President is pleased to announce that he has tested negative for the virus.*
106. **Throat:** a passage in the neck through which food and air pass on their way into the body; the front part of the neck.
107. **Throat pain:** also known as sore throat, refers to the discomfort, pain, or irritation experienced in the throat. It is a common symptom that can result from various

causes, including infections, environmental factors, or excessive strain on the vocal cords.

108. **Tissues:** refer to groups of similar cells that work together to perform specific functions within the body. Tissues are the building blocks of organs and play a crucial role in the structure and function of various physiological systems.
109. **Transmission** (noun): transfer of a disease from animal to human or from human to human - *Transmission of many diseases can be direct or indirect.*
110. **Transmit** (verb) - often passive: cause a disease to pass from animal to human or from human to human - *Many diseases are transmitted through physical contact.*
111. **Treat** (verb): attempt to cure or alleviate an illness or injury through medical care - *Doctors cannot currently treat COVID-19 directly and instead concentrate on relieving symptoms.*
112. **Treatment:** something that is done to cure an illness or injury, or to make somebody look and feel good.
113. **Treatment** (noun): medical care given to a patient for an illness or injury - *There is currently no specific antiviral treatment for COVID-19, and infected patients receive supportive care to help relieve symptoms.*
114. **Vaccine** (noun): a substance used to protect humans and animals from a disease - *A vaccine for cholera was invented in 1879.*
115. **Vessels:** refers to blood vessels. Blood vessels are tubular structures that form a complex network throughout the body, transporting blood to and from various tissues and organs. There are three main types of blood vessels: arteries, veins, and capillaries.
116. **Viral** (adjective): describing something like, caused by, or relating to a virus or viruses - *Antibiotics cannot be used to treat viral infections because they don't kill viruses, only bacteria.*
117. **Virus** (noun): a living thing, too small to be seen without a microscope, that causes infectious disease in animals and humans - *Like all diseases caused by viruses, the common cold cannot be cured with antibiotics.*
118. **Vomiting:** is a reflex action that involves the forceful expulsion of the contents of the stomach through the mouth. It is a natural and protective response of the body to eliminate harmful substances, toxins, or irritants. Vomiting is often colloquially

referred to as "throwing up" or "being sick". Simply, it is bringing food from the stomach back out through the mouth.

119. **Vulnerable patients:** refer to individuals who are at an increased risk of experiencing adverse health outcomes due to various factors, including their health status, age, socio-economic conditions, or other underlying vulnerabilities. These individuals may require special attention, care, and support to address their specific needs and mitigate the risks associated with their vulnerability.
120. **Watery eyes:** or epiphora, is a condition characterized by excessive tearing or the production of an abnormal amount of tears. It can result from an overproduction of tears, inadequate drainage of tears, or irritation of the eyes.
121. **Zoonotic (adjective):** describing a disease that can be transmitted from animals to humans - *To protect yourself from zoonotic diseases it's best to avoid bites and scratches from animals.*