



European Journal of Educational Research

Volume 11, Issue 4, 2139 - 2151.

ISSN: 2165-8714

<http://www.eu-jer.com/>

Enhancing Oral Skills and Motivation Through Role-Playing Activities in Medical Students

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Received: March 24, 2022 ▪ Revised: July 6, 2022 ▪ Accepted: September 10, 2022

Abstract: Nowadays, Peruvian physicians commonly give oral medical reports to a patient's family in English. For this reason, this research seeks to demonstrate the effectiveness of an Intervention Program for improving oral skills through role-playing activities, one hand, and, on the other, it aims to discover the kind of motivation, both goals in 40 students belonging to the Medicine Faculty of Universidad Nacional de Piura. This study has two parts, in the first quantitative phase, it measured the level of oral skills in these students, through an oral pre-test. After that, the students participated in an intervention program consisting of role-playing activities where the doctors usually use radiography to explain a medical condition. Then, the students were evaluated on their oral skills using an imaginary hospital situation similar to the pre-test. In the second part, the qualitative phase measured the Motivation of these students using the Attitude Motivation Test Battery (AMTB) in addition, a semi-structured interview could support the findings obtained in the aforementioned survey. The main findings were the improvement of oral skills and both Integrative and instrumental motivation in these students thanks to role-playing activities application.

Keywords: *English for medical purposes, intervention program, oral skills, role-playing.*

To cite this article: Gutiérrez-Huancayo, V. R. (2022). Enhancing oral skills and motivation through role-playing activities in medical students. *European Journal of Educational Research*, 11(4), 2139-2151. <https://doi.org/10.12973/eu-jer.11.4.2139>

Introduction

English is considered the "lingua franca" for many reasons, meaning that a large proportion of the global population uses it to communicate information in multiple daily contexts (Mukhtar et al., 2021). According to Williams (2014), one of those reasons is the globalization that has consolidated English as the language used in multiple fields of human development. To give just one clear example, the academic field has experienced remarkable growth in scientific output, and a major proportion of this is published in English (Yakhontova, 2021), giving rise to the impressive number of papers published in this language, versus others. Baron (2012) mentions that 80% of papers are in English, primarily because writing an article in this language, improves academic promotion, both for authors and scientific institutions. In this way, it is notorious the difference between the number of articles found in a known database about hypertension (846 090 documents) versus its version in Spanish (3 321 documents); additionally, we have to consider that mentioned by Crystal (2018) about the diffusion of above-mentioned scientific production through the internet, without forgetting the overwhelming number of internet users, who communicate in English. In the face of this reality, we ask ourselves what appropriate English our students need and how we as teachers have to teach it nowadays. In response to these questions, Basturkmen (2010) suggests the implementation of English for specific purposes (ESP) which is used in real-life situations, that is, our students need to know the English used at work, in the store, in the bank, and the hospital. In addition to this, she adds that this type of English should be focused on real-world activities, which are generally used outside the classroom, and developed at a specific time. In this sense, ESP is a sub-division of traditional English, particularly aimed at real-life English, or the English used in the various professional, occupational, and academic contexts (Markee, 1993). ESP is regarded, moreover, as a subject with three approaches: first, it is directed at students with specific needs, second the mastery of English in a different and specific context and third, the appropriate use of materials and technics, in the moment of teaching it (Paltridge, 2015). Meanwhile, Flowerdew (2012) concludes that detecting students' language needs is the principal goal of ESP.

English for Medical Purposes

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At the same time, it is important to highlight that the ESP has been divided into various sub-fields, one of them is English for medical purposes (EMP), which is composed of the terminology used specifically for health professionals to understand the diverse clinical settings, resolve problems, to maintain good communication with the patients and publish research paper in high impact journals, jointly their participation in international events (Antic, 2007). For the connoisseurs, the analysis of the environment, and students' needs, are vital for the success of the ESP subject (Rahman, 2015), that is why EMP has been implemented with two branches, each of them with a different approach, seeking to achieve the aforementioned goals. The first is the English for occupational purposes (EOP) which are regarded topics about the day-to-day hospital situations, like medical consultation, making a prescription, activities in Emergency Room (ER), or how to make an explanation to the patient about his/her medical condition, while the English for educational purposes (EEP) is focused in topics like anatomy, physiology, pathology in human being, and commonly are part of faculty of medicine curricula, Skehan (1988). While it is true that studies, like the one made by Hwang and Lin (2010) have demonstrated that many medical students consider that reading magazines, newspapers, and conference brochures in English, are among their main needs, must also be stressed that speaking skills for making presentations and participating in conferences also need in this type of students, (Vahdany & Gerivani, 2016). Zrnikova (2014) mentions the need for speaking about multiple medical issues from these students and uses academic presentations as a strategy to achieve this. On the other side, Karimnia and Khodashenas (2018), concluded that the needs of the medical students should be contained in ESP books for doctors, placing great importance on speaking skills.

Speaking Skills

The teaching of EMP has the primary aim to promote the proficiency of receptive (reading and listening) and productive (writing and speaking) skills in English normally used by doctors, nurses, dentists, pharmacists, obstetricians, and other health professionals. Of all skills referred, speaking is essential for effective doctor-patient, doctor-doctor, and many times doctor with a patient family communication (Goto et al., 2021). Besides that, speaking is often regarded as the most complicated skill for English as a second language (ESL) students. The same applies to EMP students who try to communicate several clinical situations, like describing a patient's condition (Hutchinson & Waters, 1987). The complexity of speaking skills is due to learners having few practical experiences using the target language, lack of motivation, lack of confidence, unsuitable vocabulary, and the use of inappropriate teaching technics (Alrasheedi, 2020). If we analyze each aforementioned barrier, we must cite García (2012) who argued that a favorable environment supplies easy learning. In another word, if the students have more opportunities for using a foreign language, the process of its learning becomes easier. A study made by Ali and Ebrahimimehr (2021) concluded that is fundamental to teach medical vocabulary, grammar and pronunciation should be taught in an integrative way, rather than singly, if we as teachers want to enhance the English language.

Roleplaying

Role-playing is currently one of the most used learning technics, where the participants adopt a specific role and interact with each other, taking into account a real context. On many occasions, role-playing has been considered a great choice for improving English languages skills, above all productive skills (speaking and writing), it can be mentioned in cases such as those described by Huang et al. (2021) where a medical students group belonging to the group that used role-play as a learning approach, obtained better scores than the control group. The authors of this paper highlight the improvement of communication skills and empathy towards patients in the experiment group. There is also the case of Oradee (2013) whose work concluded that working in a group using role-playing, means, first, that the students help each other, second, they lose the fear to make mistakes when they are speaking, third, they can support other groups, as a result, the students feel comfortable when they speak. Driscoll (1994) argues that role-playing as a teaching method comes from the view that knowledge is formed in students from the understanding of their experiences. These experiences could be done in the classroom, and they are preferably performed in a real context. This improves critical thinking, analysis, and solving problem processes in the students. According to Cherif et al. (1998), the application he Role-playing consists of four stages, in the first, the professor prepares and explains the activity, in the second the students prepare the activity, in the third, the students perform the role-playing, and in the final stage, the students discuss the process.

Motivation

Several authors have referred to motivation as what determines the success or failure of learning and had treated to define this in different ways, all of them in a psychological and social context. In this way motivation is called the emotion, reason, and need, that moves the person towards a specific purpose (Dörnyei, 1998). For Santorelli (1977), the students are involved in their motivation naturally and voluntarily, and she added that a key aspect of boosting motivation is to develop funny and interesting tasks in the all, instead of rewarding them every time they do this. For their part, Hsiao and Su (2021), concluded that the introduction of technology improves the learning in students and therefore their motivation, moreover, the latter should be better if it includes games. While Al-Tamimi and Shuib (2010) concluded that is crucial to take into consideration the needs, motivation, and learning disabilities for designing an ESP course.

The experts on Motivation have established two types of motivation: integrative and instrumental motivation, the first is related to the interest of the students in traveling to several countries and meeting new people. The second results from the interest of the students to improve in their careers and think primarily about future employment. Indeed Kubs & Michalowska-Kubs (2020) concluded that adults have primarily integrative motivation and are less likely to lean towards instrumental motivation, this is because Lithuanians were motivated to learn their mother tongue because this worked them more to meet more people. Therefore, the author stated that learning a new language has to do mainly with integrative motivation. On their side, Amoah and Yeboah (2021) stated that the crucial factors influencing the achievement of speech are primarily psychological rather than linguistic, and among these, both integrative and instrumental motivation is considered. Meanwhile, Hernández (2006) concluded that there is clear evidence that integrative motivation and speaking skills are closely related. And Xiao et al. (2011) concluded that we the teachers should teach English, taking into account what our students expect to use within and outside the classroom. In other words, when the language learned is useful during class and to communicate with people, the students will keep motivated also.

Peruvian Context

In Peruvian universities, English I and II are two subjects given to medical students, on compulsory form, and even though the majority of updated information is in English, there is no appropriate dissemination of knowledge in English. Research made by Arce-Villalobos et al. (2017) revealed that the majority of medical faculties have in their educational programs both English I and English II, and their educational contents are the same for all professional careers. The author adds that some medical faculties had decided to outsource the teaching of English for Specific Purposes, specifically English for Medical purposes to language institutes. In the same context, Arriola-Quiroz et al. (2010) described the features of a thesis published by medical students from a private university, where the aforementioned research works are often published in indexed journals, and the majority of cases are in Spanish. A study made by Hewings (2002) concluded that knowing the needs and limitations of the students is crucial for achieving the competencies in the English language that they require.

There are also positive experiences like those described by Olivos and Tippin de Malpica (2020) where Peruvian students of a private university participated in a blended workshop together with American, Chinese, and Mexican students, resulting in a significant improvement in employability and communication skills, jointly with their English Language abilities.

Research Questions

1. Do roleplaying activities improve speaking skills in medical students?
2. Do roleplaying activities improve the motivation of medical students?

Methodology

Sample

40 first-year medical students, aged between 17 and 44 years, and studying at the faculty of medicine of Universidad Nacional de Piura (UNP) – Peru, participated in this research. The method of sampling was purposive sampling because the author was specifically focused on students who did not have basic knowledge of English for medical purposes.

Research Design

This research used the online-learning option Sergejeva et al. (2021) and was conducted in June-October 2021. On the other hand, the scores from oral presentations and the results of the AMTB survey application in 40 medicine students formed the data obtained for this research, and was generated in the following form:

The first phase, also considered the quantitative phase, was focused on the assessment of speaking skills, before and after implementing the Roleplaying activities. To measure the oral skills, a rubric was used where the next performance attributes were considered: fluency and coherence, lexical resource, grammatical range, and pronunciation. This choice was due to the advantages of this rubric mentioned by Ulker (2017). It was chosen the oral assessment to avoid the students cheating (Elimam & Mohammed, 2016). The pre-test was designed with only two questions, while I showed different x-ray pictures, what is this? And what is the probable treatment for the disease? while the post-test was designed for measuring oral competencies through role-playing carried out by the author and the students. The topic of the conversation was an imaginary situation where the author was a member of the patient's family who wanted an explanation of the health condition of the patient through an X-ray picture, while the student was a doctor, who gave a detailed explanation about a possible diagnosis and treatment. The topic treated in this part of the research was chosen by each of the students.

EMP Intervention Program

The EMP program was developed in 10 weeks, using synchronous and asynchronous classes through google meet. The description of the topics considered in this program is detailed in Table 1.

Table 1. Description of EMP Program

Week	Topics	Product
1	<i>The human skeleton</i> , bones and fractures, changes in the patient after a patient, and possible treatments.	Role-playing about large bone fractures, and activity was made with the aid of x-ray pictures.
3	<i>The central nervous system (CNS)</i> , the brain, anatomy, functions, effects in CNS after a cranial fracture, and possible treatments.	Role-playing about effects in CNS after a cranial fracture, the activity was made with the aid of x-ray pictures.
5	<i>The respiratory system (RS)</i> , anatomy, functions, common diseases in RS, symptomatology, and possible treatments.	Role-playing about different pulmonary pathologies that affect RS, all these activities were made with the aid of x-ray pictures.
7	<i>Cardiovascular system</i> , the heart, structure, blood vessels, anatomy and physiology, and cardiac insufficiency.	Role-playing about changes in the heart, in a case of cardiac insufficiency, this activity was made with the aid of x-ray pictures.
9	<i>How to explain to the patient's relatives or friends</i> , what happens with the patient in a hypothetical scenario in the emergency room (ER).	Role-playing is made by the students, who are the doctors who explain what happens with the patient with the aim of different x-ray pictures.

As can be noted from the previous table, the topics had a fundamental approach to the anatomy of a specific structure as in the case of bones, after that their functions, and finally the description of a common medical situation like fractures, through radiography using role-playing activity. A similar situation occurs with the Central Nervous System and the effects on this after a cranial fracture, the respiratory system and pulmonary fibrosis, the cardiovascular system, and cardiac insufficiency, all seen through x-rays pictures. This part of the methodology was based on the achieved results by Alamer and Alharbi (2021) and the results obtained by Kumar (2021) about the visual materials used to improve speaking skills. It is appropriate to add that during the synchronous classes that were developed the main topics placed special emphasis on vocabulary about anatomy, medical record, pathologies, possible diagnoses, and possible treatments. Do not forget that vocabulary is a substantial part of speaking skills learning (Zheng, 2012) and during asynchronous classes, it was carried out role-playing activities, in addition, it provided feedback above all on pronunciation, fluency, and grammar which are speaking skills attributes.

In the second phase, also considered the qualitative phase, the students responded to the 28 items of the AMTB survey, in this latter were considered the Interests in the Foreign Language, Motivational Intensity, Integrative Orientation, and Instrumental Orientation domains. Furthermore, I want to clarify that the AMTB survey was modified, the second aim of this research was to measure the Motivation of the students after the intervention program. This survey showed high reliability (Cronbach's $\alpha=.825$). The results obtained from this survey were compared with semi-structured interview answers given by six students. The questions were related to motivation toward English learning and done in Spanish to prevent problems with the language at the time of giving their opinions (Mackey & Gass, 2015). On the other hand, was applied the Shapiro-Wilk test for determining the normality of data, and the results of this test were higher than .05, therefore the data is normal.

Results

This research was performed for determining if the English for Medical Purposes program, where we used role-playing activities to improve speaking skills and motivation, and it is important to point out the data obtained were analyzed in SPSS 22. In this way, the first results showed the quantitative part of the research, these consist of the means of the scores obtained both pre and post-test.

Table 2. Paired Samples Statistics

	Mean	N	Typical Deviation	Standard error
Pre-test	3.15	40	1.369	.216
Post-test	17.13	40	1.924	.304

Source: Pre and Post-Test (June-October 2021).

First of all, it is important to mention that these scores are classified in the next level of mastery: 0.0- 6.0 unacceptable, 7.0-9.0 beginning, 10.0-13.0 developing, 14.0- 17 accomplished, and 18.0-20.0 excellent. Consequently, is displayed a distinct difference between pre and post-test, that is to say, there is a difference of more than 13 points in their means. To determine the significance between pre and post-test applied paired samples t-tests, are used for comparing two measurements from the same individual or group (Pham & Jimenez, 2012).

Table 3. Paired Samples Test of Pre and Posttest

	Related differences				t	df	Cohen's d	Sig. (2-tailed)
	Media	Typical Deviation	Standard error	95% confidence range Inferior Superior				
Pre-test	-13.975	2.475	.391	-14.767	---	39	1.66	.000
Post-test					-35.706			

Source: Pre and Post-Test (June-October 2021); $p < .05$

As can be appreciated in Table 3, the significance obtained ($p = .000$) is lower than set the level of $\alpha (.05)$, revealing, therefore, the effectiveness of the English for Medical Purposes Program, which used role-playing activities. At the same time, we can come to realize that the effect size is large, this accordance with Cohen's d, where 1.66 is greater than 0.8. The next table has detailed the results of each criterion of the speaking rubric. I have to add that the four speaking criteria were measured on a 5-point scale given, in other words on the vigesimal system (base 20).

Table 4. Mean Scores and Standard Deviation of the Speaking Criteria, Before and After the English for Medical Purposes Program

Speaking Criteria	Pre-test	Std. Deviation	Post-test	Std. Dev.
Fluency and coherence.	0.775	0.973	4.225	0.767
Lexical resources	0.800	0.757	4.150	0.833
Grammatical range	0.825	0.873	4.425	0.930
Pronunciation	0.750	0.926	4.325	0.858

Source: Data obtained from pre and post-test.

As the previous table shows, there is a clear difference between the four speaking criteria before and after the English for medical purposes program, where role-playing activities are used. It is notable the difference above all in grammatical range and pronunciation. This is reflected in the correct use of grammatical structure, and the enhancement in pronunciation which is considered accomplished. Something similar occurs with the rest of the criteria, in which there is a marked difference of 3.0 points approximately.

In the qualitative part of this research was applied the AMTB survey, regarding four scales: Interest in foreign Language, Intensity, integrative orientation, and instrumental orientation. In this sense, the following table provides the results about the Interest in the foreign language of medical students.

Table 5. Interest in Foreign Language

	Frequency	Percent	Valid Percent	Cumulative Percent
Disagree	12	30.0	30.0	30.0
Agree	25	62.5	62.5	92.5
Strongly agree	3	7.5	7.5	100.0
Total	40	100.0	100.0	

Source: Data obtained from AMTB survey application (October 2021).

The data observed in this table, shows that 70% of students agreed that they had an interest in a foreign language, this is reflected in that they were at any rate interested to speak many foreign languages, and if they will be in a foreign country, they would try to learn the new language. It is important to emphasize that 30% of them coincide with those foreign languages that sound unsophisticated, and they would prefer to see a TV program in Spanish. It should be added that there were semi-structured interview answers like:

"It is a goal that I would like achieving, and I have set for my life, and it would be beneficial to get it" (student 1).

"I like my home language, but English is the language that everybody should master" (student 2).

Table 6. Motivational Intensity

	Frequency	Percent	Valid Percent	Cumulative Percent
Disagree	16	40.0	40.0	40.0
Agree	22	55.0	55.0	95.0
Strongly agree	2	5.0	5.0	100.0
Total	40	100.0	100.0	

Source: Data obtained from AMTB survey application (October 2021).

As shown in table 6, 60% of students agreed that they pay attention to feedback received during the class, that they try to understand what they see and hear, or that they claim the effort that they do for learning English. Moreover, it should be noted that 40% of them affirm that they bother checking their assignments or they do not care to try understanding the more complex items of English. The following provides some answers to semi-structured interviews in this respect.

"I would like to lead medical projects, where the used language is English, it is for this reason that I have to improve my English skills" (student 3).

"In the future, I would like to participate in medical projects in English, at the moment, I am learning English" (student 4).

Table 7. Integrative Orientation

	Frequency	Percent	Valid Percent	Cumulative Percent
Agree	2	5.0	5.0	5.0
Strongly agree	38	95.0	95.0	100.0
Total	40	100.0	100.0	

Source: Data obtained from AMTB survey application (October 2021).

The table above is highlighted a high percentage of integrative orientation from students, that is to say, the students indicated that learning English allows them to talk to many people, and interact with people in multiple social contexts. These findings are fairly consistent with expressions like:

"English is the language more used in the medical area, this will connect us with the entire world" (student 1).

"I would like to be surrounded by people who know about medical issues and know about English" (student 2).

"English is the global language. I would like to master this language (English), and to be in touch with the rest of the professionals, and get my goals" (student 5).

Table 8. Instrumental Orientation

	Frequency	Percent	Valid Percent	Cumulative Percent
Disagree	1	2.5	2.5	2.5
Agree	3	7.5	7.5	10.0
Strongly agree	36	90.0	90.0	100
Total	40	100.0	100.0	

Source: Data obtained from AMTB survey application (October 2021).

The last table (Table 8) showed that almost all students agreed that English is necessary for their professional careers, and to achieve a job. These outputs were in line with the answers given by the students:

"I have to improve my English skills to help people, and can give them health care" (student 3).

"English gives us opportunities in our career and also employment opportunities" (student 6).

Discussion

The following article sought to determine the effectiveness of the English for Medical Purpose program where was used role-playing activities, and on the other hand to determine the Motivation orientation of 40 medical students from UNP-Peru.

The results obtained in the quantitative part show significant differences between pre and post-test, before and after EMP program application, where was used role-playing activities. These findings could be in line with the studies made by Alquirashi (2016) and Zrníková (2015) who propose that medical students pay full attention to all knowledge that comes clinical field, even in English, much more if it helps them achieve their goals as students, and in the future scenario as doctors working at hospitals, consequently, all medical topic teaching properly has a positive impact on the communicative competences in this type of students (Arani, 2015). The description of clinical conditions using x-ray

pictures or radiography could be another factor that has a positive impact on the learning of EMP, and therefore also on speaking skills in these students (Kumar, 2021). Similarly, Gudu (2015) concluded that role-playing is an important factor in oral skills improvement, in this way, it is possible to state that there was a clear increase in oral competencies, above all lexical resources, which is a competence related to the specific vocabulary. And the studies made by Fuentes et al. (2021), demonstrated that the instruction that is used in real-life situations promotes oral competencies, above all if these situations are complemented by role-playing activities.

The latter ultimately concurred with as mentioned by Khan et al. (2018) the relationship between vocabulary and language skills mastery. The other oral competence with a clear increase was grammatical range, this coincided with the results obtained by Koroğlu and Çakır (2017). At the end of this part, it could be observed that the students showed a clear mastery of health topics using x-ray pictures, a similar situation happened to Nikam (2021) who demonstrated that oral competencies improve to the extent that the topic used will be useful by students at present and future.

The second part of this research shows that 70 percent of students agreed that they were very interested in learning a foreign language (Table 5), in other words, the students would like to master foreign languages, mainly English, these outputs are similar to the ones obtained by Chalak and Kassaian (2010). The other 30 percent belongs to the choice of seeing TV programs in Spanish instead of their original version and subtitled, a situation observed by Yadav (2014) who considers that the student normally uses the target language as required, for example in academic topics. Also, when the students' point of view about the harsh sound of English, is according to Van Heuven (2009) a common situation in language learners and it would be studied profoundly by linguistics.

Table 6 shows to 60 percent of students agreed that they study so hard English, that they pay attention to feedback in class, and also that they ignore distractions when studying, these results are consistent with the comments made by Yang et al. (2009) in the sense that a good teaching methodology plus a hard work equals success. The other 40 percent belong to the little interest from students in understanding the complex part of English, this relates to as expressed by Saipanish (2003) who suggested that medical students lack time to review what they learned for example English, and Cabas (2016) states that the students give priority to another subject.

Table 7 shows the integrative motivation in this group of students, where is noteworthy that 100 percent study English to interact with a lot of people, to know their lifestyles, and to know many places these results are in line with what was proposed by Samad et al. (2012) about the relation between integrative motivation and learning with opportunities to participate, in a real-life context. On his part, Yu and Shen (2012) mentioned that integrative motivation is a common situation in students who are preparing to travel.

In the last table, we can observe that 99 percent of students are instrumentally motivated, which means that most of them are interested in learning English to obtain a great employment option, the people respect, and as a tool that optimizes their professional career. A similar situation happens with Latifah et al. (2011), who demonstrated that in classes where there is anxiety management, is more probable the students are instrumentally motivated, this is due to the right learning given to students gives them enough self-confidence for communicating in English.

Consequently, among the possible reasons for the results of this research are that role-play is an efficient method, that produces a favorable condition for effective communication in the students (Burenkova et al., 2015), and if the medical students learn English useful to improve their academic and working life, they will be motivated (Nezaratgo & Behzadpoor, 2017).

Conclusions

This research sought to show that an English for medical purposes program, in which role-playing activities were used, significantly improved the speaking skills of medical students of the Medicine Faculty of Universidad Nacional of Piura-Peru. For that matter, we could see the four oral criteria assessed in the students: fluency and coherence, lexical resources, grammatical range, and pronunciation improved after the EMP program application. Likewise, it was noted that the students were motivated both integrative and instrumentally oriented, that is to say, they are convinced that English is useful both to travel around the globe and get a good job, all of this after of English for Medical Purposes program where was used role-playing activities.

Recommendations

In the current study it was noted the willingness of students to study different medical topics in English because they are aware of the usefulness of this language, therefore recommended that English be used in diverse medical courses taking into account that the best way to disseminate information about health in Peru, its complex problem, in its various medical fields is through the English. To give an example, in Peruvian hospitals have been reported that some antibiotics indicated as first-line antibiotics for renal infectious in English updated books are not effective in Peruvian patients. If Peruvian doctors could share this information with international organizations related to drug therapies in English, these treatment schemes would change. On the other hand, this research sought to determine whether the roleplaying activities enhance the oral skills of medical students who speak Spanish, consequently, this could be considered in future research, other instructional strategies, which are more related to the juvenile context like comics or any medical drama television

series, in both of them, their characters live numerous experiences in the hospitals, and, at the same time, they are beloved by the public who read and see them. On the other hand, further research about the main difficulties of Peruvian medical students in learning the English language would allow us to know, what are the gaps that we as teachers would take into account previous to applying any teaching strategy.

Limitations

In 2020 and 2021, the Peruvian universities have been forced to use synchronous and non-synchronous classes, in consideration has been used options like google meet, zoom, and other mechanisms of communication with the students, aforementioned was due to the COVID-19 pandemic. The Universidad Nacional de Piura was not unrelated to these challenging circumstances and chose to use Google meet to accomplish the classes in all faculties, among them the Medicine Faculty. In this sense, this research used the online-learning option Sergejeva et al. (2021) and was conducted in June-October 2021. For this reason, there were informed multiple internet connection problems,

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Appendices

Appendix 1. Results of the application speaking skills rubric (Mean and Standard deviation)

Test	Fluency & Coherence	Lexical Resources	Grammatical Range	Pronunciation	Sum	SD
Pretest	0.775	0.800	0.825	0.750	3.150	1.3690
Post-test	4.225	4.150	4.425	4.325	17.125	1.9240

Appendix 2. Results of the ATMB survey

Interest in Foreign Language	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
I wish I could speak many foreign languages perfectly.	29(72,5)	8(20,0)	3(7,50)	—	—
Studying foreign languages is not enjoyable.	1(2,5)	3(7,5)	4(10)	6(15)	26(65)
I wish I could read newspapers and magazines in many foreign languages.	27(67,5)	10(25)	3(7,50)	—	—
I have no interest in foreign languages.	1(2,5)	2(5)	1(2,5)	2(5)	34(85)
I would like to learn many foreign languages.	29(72,5)	8(20)	1(2,5)	1(2,5)	1(2,5)
We don't have to learn foreign languages.	1(2,5)	1(2,5)	2(5)	4(10)	32(80)
If I planned to stay in another country, I would try to learn their language.	32(80)	5(12,5)	3(7,5)	—	—
Most foreign languages sound crude and harsh.	3(7,5)	1(2,5)	13(32,5)	13(32,5)	10(25)
I enjoy meeting people who speak foreign languages.	26(65)	8(20)	5(12,5)	1(2,5)	—
I would rather see a TV program dubbed into our language than in its language with subtitles.	2(5)	5(12,5)	14(35)	11(27,5)	8(20)

Note: the respective scale of the 5-point Likert Scale is as follows: strongly agree (5 points), agree (4 points), neutral (3 points), disagree (2 points), and strongly disagree (1 point).

Motivational Intensity	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
I don't pay much attention to the feedback I receive in my English class.	2(2,5)	—	5(12,5)	6(15)	27(67,5)
I make a point of trying to understand all the English I see and hear.	22(55)	13(32,5)	4(10)	—	1(2,5)
I don't bother checking my assignments when I get them back from my English teacher.	6(15)	5(12,5)	5(12,5)	11(27,5)	13(32,5)
I keep up to date with English by working on it almost every day.	6(15)	16(40)	15(37,5)	3(7,5)	—
I put off my English homework as much as possible.	3(7,5)	3(7,5)	16(15)	13(32,5)	15(37,5)
When I have a problem understanding something in my English class, I always have my teacher for help.	20(50)	11(27,5)	8(20)	1(2,5)	—
I tend to give up and not pay attention when I don't understand my English teacher's explanation of something.	3(7,5)	2(5,0)	5(12,5)	7(17,5)	23(27,5)
I work hard to learn English.	17(42,5)	16(40)	5(12,5)	2(5)	—
I can't be bothered trying to understand the more complex aspects of English.	10(25)	7(17,5)	11(27,5)	10(25)	2(2,5)
When I am studying English, I ignore distractions and pay attention to my task.	36(90)	2(5)	2(5)	—	—

Integrative Motivation	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Studying English is important because it will allow me to be more at ease with people who speak English.	34(85)	5(12,5)	1(2,5)	—	—
Studying English is important because it will allow me to meet and converse with more varied people.	34(85)	6(15)	—	—	—
Studying English is important because it will enable me to better understand and appreciate the English way of life.	33(82,5)	6(15)	1(2,5)	—	—
Studying English is important because I will be able to interact more easily with speakers of English.	31(77,5)	8(20)	1(2,5)	—	—

Instrumental Motivation	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Studying English is important because I will need it for my career.	15(37,5)	21(52,5)	4(10)	—	—
Studying English is important because it will make me more educated.	31(77,5)	8(20)	1(2,5)	—	—
Studying English is important because it will be useful in getting a good job.	35(87,5)	4(10)	—	1(2,5)	—
Studying English is important because other people will respect me more if I know English.	31(77,5)	6(15)	2(5)	1(2,5)	—

Appendix 3. Reliability of ATMB survey.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,825	,856	28

Appendix 4. Links to videos

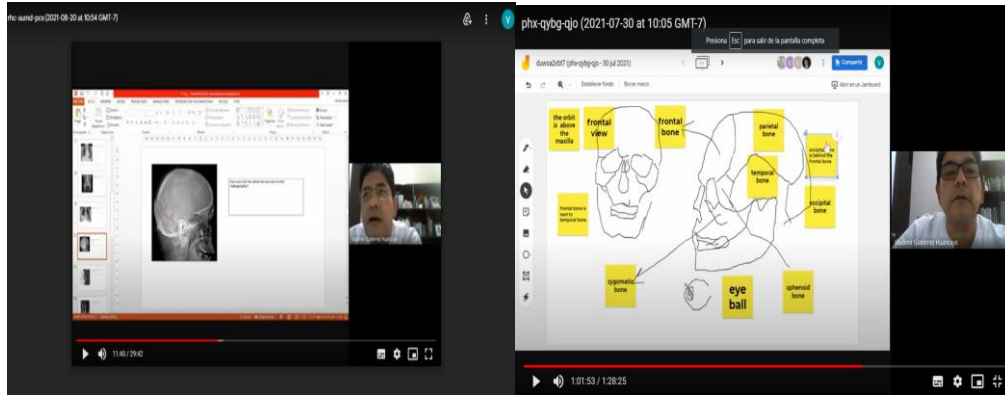


Figure 1: pre-test Figure 2: explaining cranial bones

Pre-test:

<https://bit.ly/3Q569IG>

Explaining cranial bones:

<https://bit.ly/3bhGNZk>

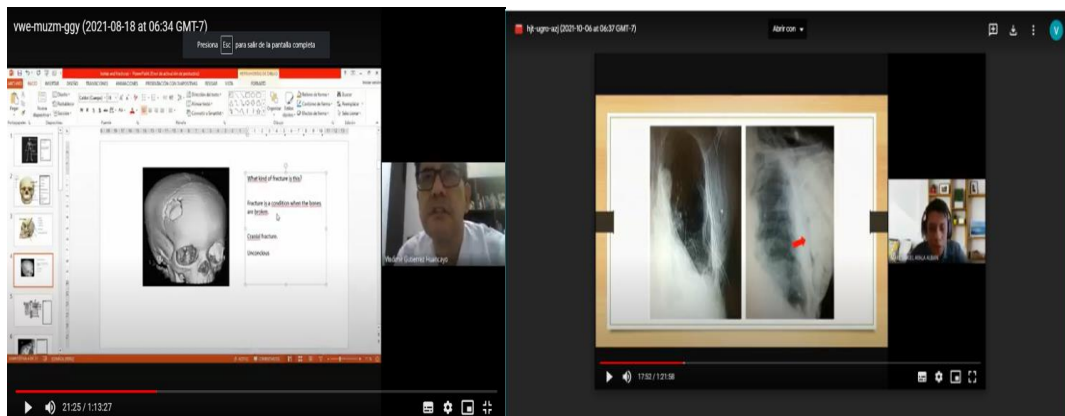


Figure 3: Describing radiographic Figure 4: Post-test.

Describing radiographic:

<https://bit.ly/3JhN0B4>

Post-test:

<https://bit.ly/3BvsTxh>

Semi-structured interview:

<https://bit.ly/3cIOnfR>