

TWO IN ONE: INCORPORATING COVID-19 RESEARCH INTO THE ENGLISH FOR MEDICAL PURPOSES CLASS TO IMPROVE THE 4+1 LANGUAGE SKILLS

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Abstract: *While the COVID-19 pandemic continues to make a profound impact on all aspects of life around the world, from the perspective of medical education it is also an opportunity not only a threat, and can be integrated into the medical curriculum, including English for Medical Purposes classes.*

The aim of this paper is to share our experience regarding the integration of a research study on the willingness of young people to get the COVID-19 vaccine into an English for Medical Purposes class. Student interviews, presentations, Think-Pair-Share activities and disputes in class are special pedagogical and methodological tools that assist the teaching and the learning process. As a result, students are inspired and engaged, which facilitate the development of not only their 4+1 language skills, and medical English proficiency, but also their collaboration, communication, and problem-solving skills, as well as their creativity and critical-thinking.

This paper seeks to inform and inspire English for Medical Purpose teachers to incorporate meaningful and intellectually stimulating research studies into their classes that allow students to not only learn medical English, but more importantly, to understand complex perspectives, use numerous forms of media, and collaborate with others. Therefore, the authors suggest that teachers of English for Medical Purposes create room in their classes for up-to-date research representation in order to engage and motivate students' learning process. Furthermore, the authors believe that the latest research studies, presentations, Think-Pair-Share activities and disputes can be implemented in any content and language integrated classes, as well as languages for specific purposes classes, thus providing educators with effective tools to achieve broad educational goals.

Keywords: COVID-19 research; English for Medical Purposes, Languages for Specific Purposes; 4+1 language skills

1. Introduction

The past one and a half years have been very challenging for the world. The COVID-19 pandemic and related lockdown and physical distancing measures have altered countless aspects of our life, including higher education. At the same time, the pandemic posed not only a threat but also an opportunity for the development of several educational technologies, innovations and research studies to be carried out from various angles. In this paper, we aim at sharing our experience regarding the integration of a research study on the willingness of young people to get the COVID-19 vaccine into an English for Medical Purposes (EMP) class during the spring semester of 2021.

Studying EMP is pivotal for future doctors today, as English is the lingua franca of medical communication, including research, conferences and publications. The COVID-19 pandemic has clearly demonstrated how global, ecological and social challenges may affect our everyday life, therefore, educators should teach students how to be resilient and develop special skills in response to these changes and challenges. These include effective collaboration, communication, intercultural, and problem-solving skills when working in local or international teams, as well as creativity and critical-thinking. Excellent collaboration, communication and intercultural skills, such as working effectively in diverse teams, making necessary concessions to achieve goals, and taking shared responsibility for collaborative work, are essential elements of the daily work of a doctor. It is also crucial to teach critical thinking, creativity and problem solving in the classroom since these skills are inevitable for future doctors in order to examine and analyse evidence, assess data, make sound judgments, establish proper diagnosis and develop treatment plans. Enhancing these skills will facilitate medical students to be cooperative, knowledgeable and professional doctors in the future. Therefore, along with several content and language integrated learning subjects in the medical curriculum, EMP classes should be adjusted in order to meet the specific academic and professional needs of the medical students.

As several research studies have proved, motivation in language learning is substantial, as there is a direct correlation between motivation and learning (Dörnyei, 2003; Brown, 2007). Fandiño (2013) argues that language classes are a venue for the integration of motivating and stimulating activities that enable students to understand multifaceted perceptions, make decisions, and collaborate creatively with others, besides developing oral, written and nonverbal communication skills in the target language.

The EMP classes are an ideal platform to enhance these skills by incorporating authentic, up-to-date research studies into the classes, thus encouraging students' motivation and engagement. Student presentations, interviews, Think-Pair-Share (TPS) activities and debates in classes are special pedagogical and methodological tools that facilitate the teaching and learning process. As a result, students are inspired and engaged, which aids the development of the skills and abilities mentioned above.

2. The 4+1 language skills

In order to increase the motivation and engagement of the medical students, the authors aimed to find an appealing and inspiring tool that facilitates the development of the four language skills: reading, writing, listening and speaking. Moreover, to introduce a fifth one based on Németh's (2018) observations, the visual comprehension skills. In her view, the teaching of today's generation in higher education should be approached differently than that of the earlier generations and additional skills need to be added to the teaching and learning process. Generation Z, born in the late 1990s and early 2000s, or as they have also been referred to as iGen or the Homeland Generation (since they spend more time at home than any earlier generations) have different needs and expectations within an educational setting (Prensky, 2001; Holmes, 2009; Dahlstrom et al., 2014;). Németh (2018) argues that the tech savvy Generation Z was born into a digital and social media dominated world, therefore, they require instant access to pictures, photos, images, sounds and information, unlike any former generations. These visual aids carry and convey relevant messages and information for them that they need to comprehend and interpret. Németh (2018) claims that even expressions in the English language, such as, "I see", "in my view", "as I see", "my point of view is", etc. suggest that visual input is a powerful skill in understanding. Moreover, Gen Z is prepared and is able to process information with the help of pictures and images effortlessly and effectively. We have known for a while that a picture is worth a thousand words, but Gen Z capitalizes on visual input, which us, teachers should embrace. Canning-Wilson (1999) argues that a visual used in language classes makes the task more authentic and visual images inspire the learner to predict and deduce information, as a consequence of which, they can use the language and its structures more fluently and naturally. Macwan (2015) also highlights the importance of visuals and claims that the potential of visual aids must be recognized in teaching-learning English. Therefore, Németh (2018) proposes adding *visual comprehension skills* development into the language classes *as a fifth skill*, depending on the age group, in the form of pictures, images, diagrams, graphs, posters and infographics that students need to understand, interpret and analyse. Enhancing medical students' visual skills will thus facilitate their work in the future as practising doctors, clinicians or researchers, since the comprehension and investigation of visual data will be in the core of their profession. Jasani and Saks (2013) had similar findings using visual art images with guided questions and they claim that those train medical students in observation skills, while Naghshineh et al. (2008) concluded that observation of artworks and understanding of fine arts concepts improve students' visual intelligence, which can be applied to patient care.

3. Literature review on the teaching methods applied in class

3.1. Think-Pair-Share activities

Think-Pair-Share (TPS) is a special methodology applied primarily in language classes to encourage both individual thinking and teamwork, communication, collaboration, and presentation. At the same time it also enhances students' critical

thinking skills, improves listening, writing and reading comprehension. TPS has been integrated in various classes and have proved to be a success. Sugiarto and Sumarsono (2014) found that after the implementation of TPS methodology the students' ability in *reading* narrative texts improved, while Usman (2015) and Raba (2017) argue that TPS contributed to the improvement of students' oral *communication* skills in EFL classrooms. Siburian (2013) claims that TPS enhanced students' achievement in *writing* descriptive text, whereas Li et al. (2019) assert that this methodology enhanced students' *listening* skills. Kaddoura (2013) reports about the development of students' *critical thinking* skills as they become actively involved in thinking about the concepts presented in their discussion.

The most common structure of TPS is the following:

1. Students are first given a stimulating topic or picture to think about and provide answers for on their own. – *Thinking and speaking time individually.*
2. Then they work in pairs or small groups, share their thoughts and ideas. – *Speaking and listening time in pairs or small groups.*
3. Finally, they discuss those with the whole class and may do additional follow-up tasks. – *Speaking, listening and/or reading, writing and presenting time in large groups.*

As Figure 1 indicates, the special TPS triad of *work alone*, *work with another student*, *work with the whole group* (Németh, 2018) capitalizes on the active involvement of each individual student from the shy, less confident ones to the most active, extroverted students. This helps to focus attention on the prompt given and facilitates the development of the 4+1 language skills of reading, writing, speaking, listening and visual comprehension.

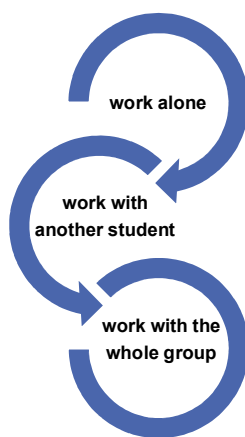


Figure 1: The Think-Pair-Share triad of developing the 4+1 language skills
Source: Németh, 2018

3.2. The Three Colour Quiz methodology

The Three Colour Quiz methodology (TCQ) is a novel pedagogical method in teaching. It has been applied in classes only in the past ten years. Fluckiger et al.

(2010) introduced TCQ with feedback on product, process, and progress. A modified version was applied in class to enhance students' speaking, reading and writing skills. The students used individual slides of Jamboard and they were asked to use *yellow* sticky notes to write down what they had already known about the spread of the coronavirus in the world and in Hungary. After discussion, they were encouraged to add their thoughts to the slides again, but this time using *green* sticky notes. As a last step, the students had to search the web and read individually for additional information to the original question and then were asked to write them all down using *blue* sticky notes. This exercise aims to reveal how the process of learning continues as they respond to the questions in three different colours. As a result, students are provided with some information on how much they are able to write on their own, with the help of others, or using the web or other resources.

4. The participants and the context

A COVID-19 research study (Sütő, 2021) was incorporated as a stimulus (see Appendix) into an Advanced (C1) Level EMP course during the spring semester of the 2020-2021 academic year, whose aim was to enhance the medical language proficiency of the students. The authors of the present paper were involved in this research study in January 2021, the goal of which was to assess the willingness of Hungarian and international young people residing in the town of Pécs and Baranya county to be vaccinated and to investigate its long-term impact on the local economy. As the target population of the survey was the young residents of Pécs and Baranya and since many Hungarian and international medical students filled in the questionnaire of the study, the authors of the present paper considered it an authentic, up-to-date and a motivating tool to be incorporated into the Advanced Level (C1) EMP class during the spring semester of 2021.

Altogether 15 second- and third-year Hungarian medical students were involved in the class, which was held for 90 minutes, once a week, during the 12-week-long spring semester. Students' English proficiency ranged between B2 and C1 levels as they had passed state recognised Hungarian and international language exams at these levels prior to registering for the class. Due to COVID-19, the classes were held online, in Microsoft Teams.

5. The development of the 4+1 language skills

5.1. Developing students' writing and reading skills

As a lead-in exercise, the students were first asked some brainstorming questions about the coronavirus, how it had changed their lives, what they had learnt from it to that point. Some special vocabulary was discussed related to the topic that they were unfamiliar with, such as *frontline workers*, *super spreaders*, and *flattening the curve*.

Afterwards a modified version of the Three Colour Quiz methodology (Fluckiger et al., 2010) was implemented to enhance their reading and writing skills. This time,

students used individual slides of Jamboard via a shared link. As a first task, they were asked to use *yellow* sticky notes to write down in 5 minutes what they had already known about the spread of the coronavirus in the world and in Hungary.

Second, they were sent into Breakout rooms in pairs to discuss their ideas in response to the original question in another 10 minutes. After the pair work they were encouraged to add their thoughts to the slides again, but this time using *green* sticky notes.

As a last step, the Breakout rooms were closed down and students were given 10 minutes to search the web and read individually for additional information to the original question and then asked to write them all down using *blue* sticky notes.

The purpose of this exercise, other than developing students' reading and writing skills is to demonstrate how the process of learning continues as they respond to the questions in three different colours. Thus provide them with an indication of how much they are able to write on their own (*yellow sticky notes*), how much they rely on peers (*green sticky notes*), and how much they rely on the web or other resources (*blue sticky notes*).

Other than this, it also gives students, who might not otherwise talk to each other, a chance to talk and it gives feedback to the teacher after checking the individual Jamboard notes to see how much additional help they might need in terms of grammar or vocabulary.

In the end, a link to the English summary of the COVID-19 research findings (Sütő, 2021) was sent to them to read on their own, discuss unknown words and as a homework they were asked to do their own research by reading additional relevant literature.

5.2. Developing students' speaking and listening skills

During the next class, students were sent to Breakout rooms and asked to interview one another in pairs in 30 minutes regarding their views on vaccination, related to the COVID-19 research summary they had received the previous class. They were also encouraged to include their thoughts and ideas based on any additional scientific articles and professional literature they had read.

Similar to Sütő's 2021 research study, students were requested to conduct semi-structured interviews. To accomplish this, the class collected a few questions to be incorporated into the interview sessions. The following questions were included but not limited to the interviews:

1. What do you think about vaccination in general?
2. What do you think about the COVID-19 vaccination?
3. Would you make it compulsory for all?
4. Do you think it is sufficient to be infected by the coronavirus to achieve herd immunity or is it still worth getting the vaccine?
5. What do you think is the solution to eradicate the COVID-19 pandemic?
6. When do you think Hungary will achieve herd immunity?
7. How many people would need to be vaccinated?

8. What would you recommend to young people to protect themselves against COVID-19?
9. How do you think young people could be persuaded to be vaccinated?
10. Is COVID-19 expected to disappear from the world or shall we have to learn to live with it?

Before the Breakout room session started, students were also reminded to be not only active speakers but also active listeners in the process, bearing in mind Covey's claims (2013) that during a speaking-listening process people often tend to reply immediately, hence they are either speaking or preparing to speak instead of listening and understanding first.

After the interviews students were split into two groups for and against vaccination and one volunteer student was nominated as mediator. They had to bring forth arguments for and against vaccination in 20 minutes. Needless to say, a hot debate followed, as being medical students and having a deeper understanding of biology, virology, epidemiology and related subjects, they had sound judgements and views from both angles.

5.3. Developing students' visual comprehension skills

In the end, students were working in teams of three and had two weeks to prepare a campaign for or against vaccination in the form of a presentation or a poster including infographics, graphs, pictures and images. They were encouraged to be creative, informative and factual to prompt class discussion and participation. Since they are medical students, the majority decided to do pro vaccination campaigns and only one group selected the anti-vaccination topic.

Presenting is a skill almost all future doctors will have to use later in their professional life, however, doing a presentation is not easy, mostly not in English, as it requires knowledge and deep understanding of the topic presented, self-confidence, English proficiency and most of all lots of practice. However, team work and team presentation proved to be a success, the students benefited and learnt a lot not only from their own, but from each other's presentation and preparing to present as a group was thus more effective for them. Excellent, high quality infographics, charts and images were included in all posters and presentations that were appealing to the students, as a result of which they were engaged and involved.

6. Conclusion

While the COVID-19 pandemic continues to make a profound impact on all aspects of life around the world, from the perspective of medical education it is also an opportunity not only a threat and can be easily integrated into the medical curriculum, including EMP classes. The aim of this paper was to share our experience regarding the integration of a research study on the willingness of young people to get the COVID-19 vaccine into an English for Medical Purposes class and through that facilitate the development of the 4+1 language skills. Based on the anonymous online feedback we received from the students at the end of the

semester, 96% of the students felt including authentic, up-to-date research studies into the classes contributed to a more engaging classroom environment. Regarding the development of the 4+1 language skills, 87% indicated improvement and 91% considered that teamwork contributed to the development of their collaboration and critical thinking skills. The special pedagogical tools and methodology enabled students to understand research processes better by searching the web for reliable sources and reading professional literature, thinking critically and analysing the data followed by discussions and presentations.

Consequently, this paper seeks to inform and inspire EMP teachers to incorporate meaningful and intellectually stimulating research studies that allow students not just to learn medical English, but more importantly, to understand complex perspectives, use numerous forms of media, and collaborate with others. Therefore, the authors suggest that teachers of EMP create room in their classes for up-to-date research representation in order to engage and motivate students' learning process. Furthermore, the authors believe that up-to-date research studies, presentations, Think-Pair-Share activities and disputes can be implemented in any content and language integrated classes, as well as languages for specific purposes classes, thus providing educators with effective tools to achieve broad educational goals. To conclude, more research is needed in this field to prove the efficiency of this type of teaching methodology as the lack of data available limits the scientific interpretation of our results.

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Appendix

The summary of the COVID-19 research incorporated into the EMP class

Background

The first identified coronavirus infection was detected on 4 March 2020 in Hungary and on 11 March, after the WHO declared a global pandemic, the government professed an epidemic emergency in the country. The outbreak has so far hit the country in three waves, with different characteristics. The first, which started in March 2020, saw the number of active cases rise until early May, exceeding 2,000, before steadily declining until the second half of July. The first deceased case was reported on 15 March 2020. By the end of the first wave in July, nearly 600 people had died from the virus (Koós et al., 2020). Rapid and drastic lockdown measures were introduced in the country, similarly to many countries in Europe and all over the world. The consequence was a significant economic downturn. The second wave started in August 2020, when many more patients were diagnosed with COVID-19, mostly young people, who are less at risk from the disease, and therefore the mortality rate in the second wave was much lower than in the first. Along the lines of the experience of the previous wave, lockdowns were introduced significantly later, mainly to protect the economy (Aidukaite et al, 2021). During the third wave of the epidemic, Hungary drifted into one of the worst countries in the world in terms of death rates (per million population). The only solution seemed to be to start the vaccination of the population as soon as possible.

Vaccination against coronavirus in Hungary

Since the first appearance of the coronavirus, researchers at Johns Hopkins University have recorded over 206 million cases and more than 4.3 million deaths worldwide (COVID-19, 2021), out of which in Hungary there were over 810,000 cases and approximately 30,000 deaths. The end of the pandemic is not yet in sight, but vaccination may be the solution to contain it. In Hungary, vaccination of healthcare staff with the US-German Pfizer-BioNTech vaccine started on 26 December 2020. The government provides the vaccine against the coronavirus free of charge, but it is not compulsory, however, anyone can get it after registration on the Vaccination Eligibility Guidance, issued by the Hungarian COVID-19 Steering Committee. According to this guidance, healthcare staff, as well as the chronically ill, the elderly and those working in the frontline were vaccinated first.

Methods

The study used a mixed research method: online questionnaires and semi-structured interviews were conducted to seek answers to the research questions. One of the main research questions of the study was to investigate the willingness of young people to get the COVID-19 vaccine. It was assumed that the uptake would not be high in this age group, as young people do not feel at risk and are therefore not sufficiently informed about vaccination, despite the fact that in the third wave it became increasingly common for young people without underlying

diseases to be hospitalised. This was also supported by statistical data from KSH, the Hungarian Central Statistical Office, which indicated that this age group had the lowest vaccination uptake (KSH, 2021). However, it was assumed that if the use of services in certain areas of life (tourism, hospitality, entertainment, etc.) were linked to vaccination, more young people would be vaccinated and this would have a stimulating effect on the local economy.

Conclusion

As the research results suggested, among young Hungarians and international residents in Pécs and Baranya, the vaccination uptake was 56%, but if the removal of the restrictions were dependent on vaccination, 71% of young people would be more willing to be vaccinated.